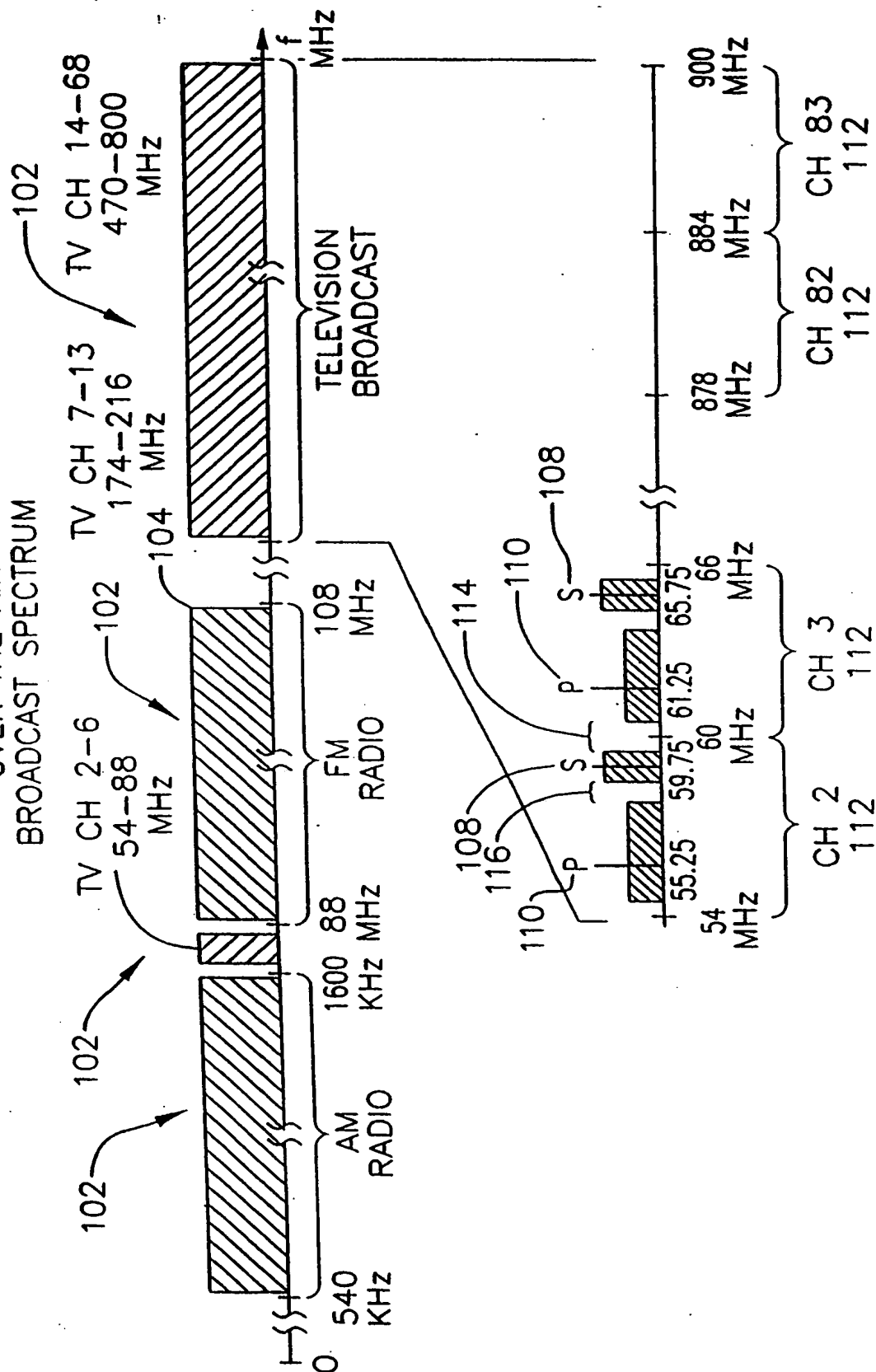
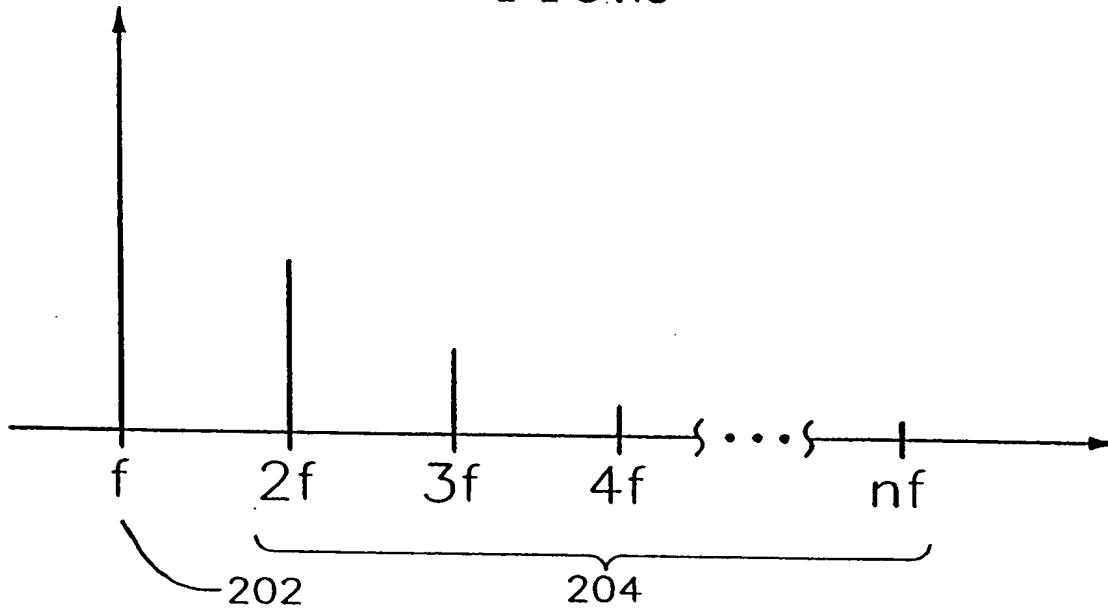


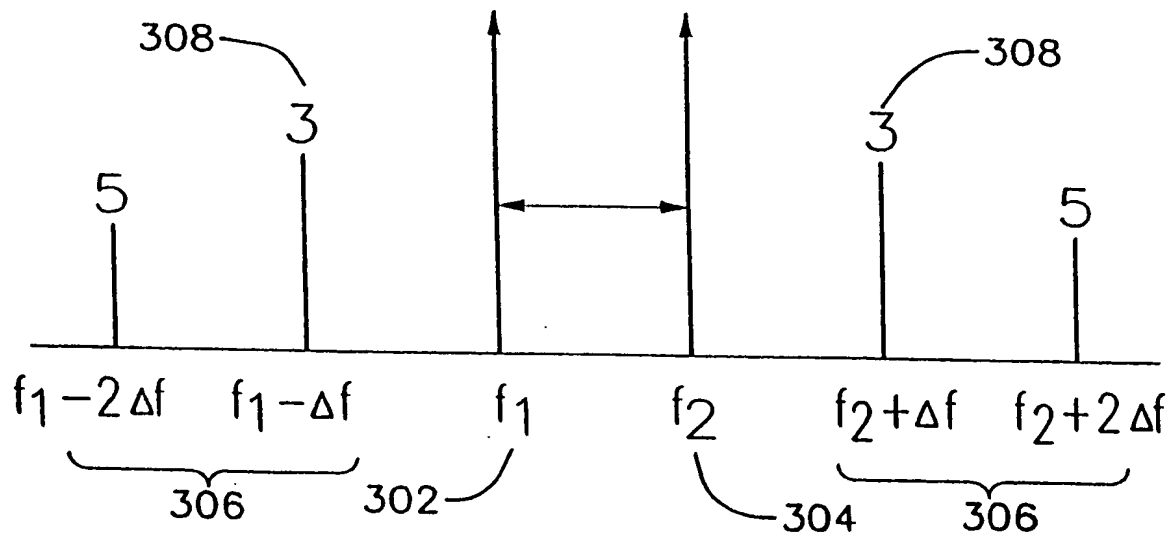
PRIOR ART  
OVER THE AIR  
BROADCAST SPECTRUM



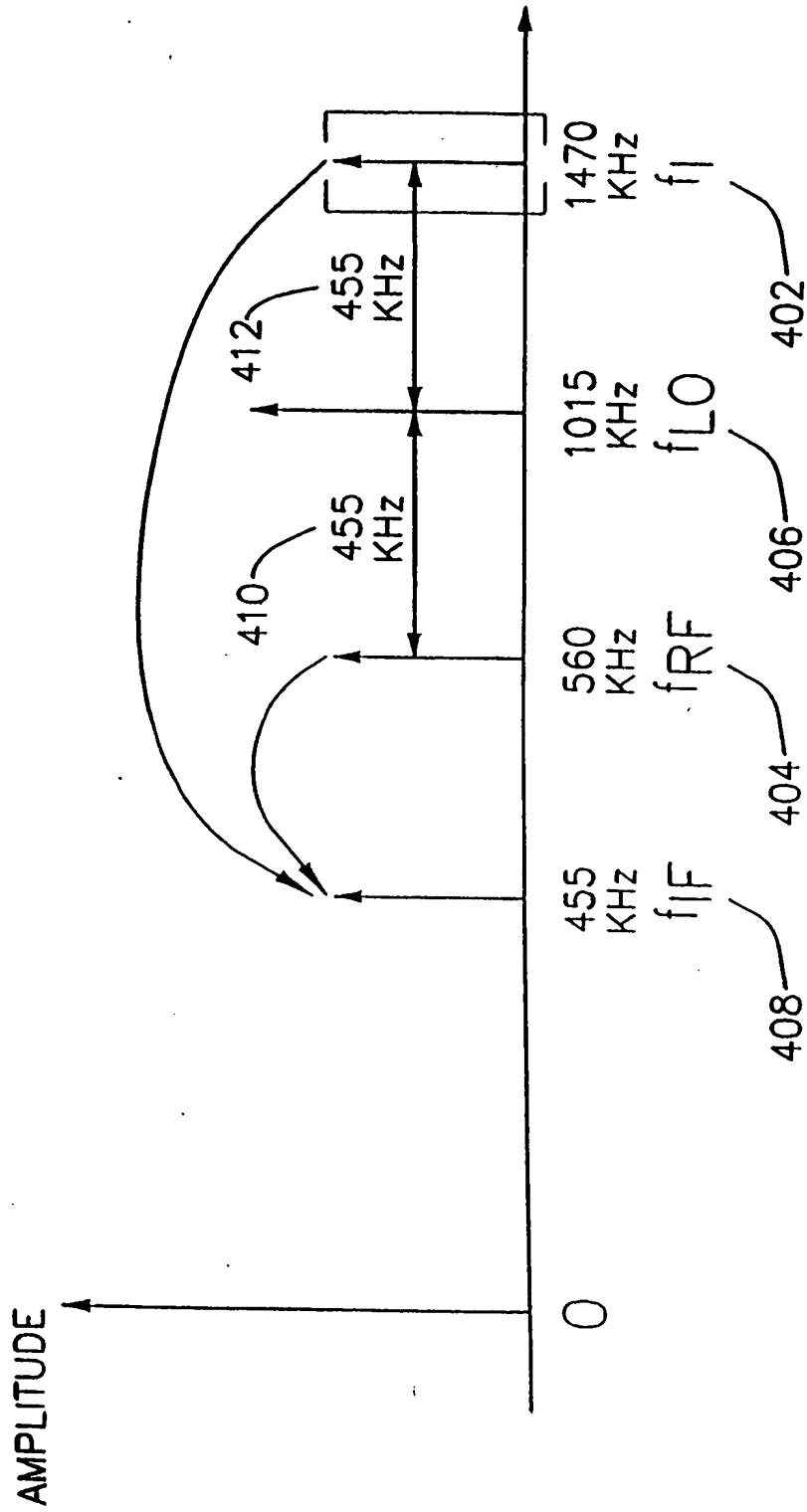
**FIG. 2**



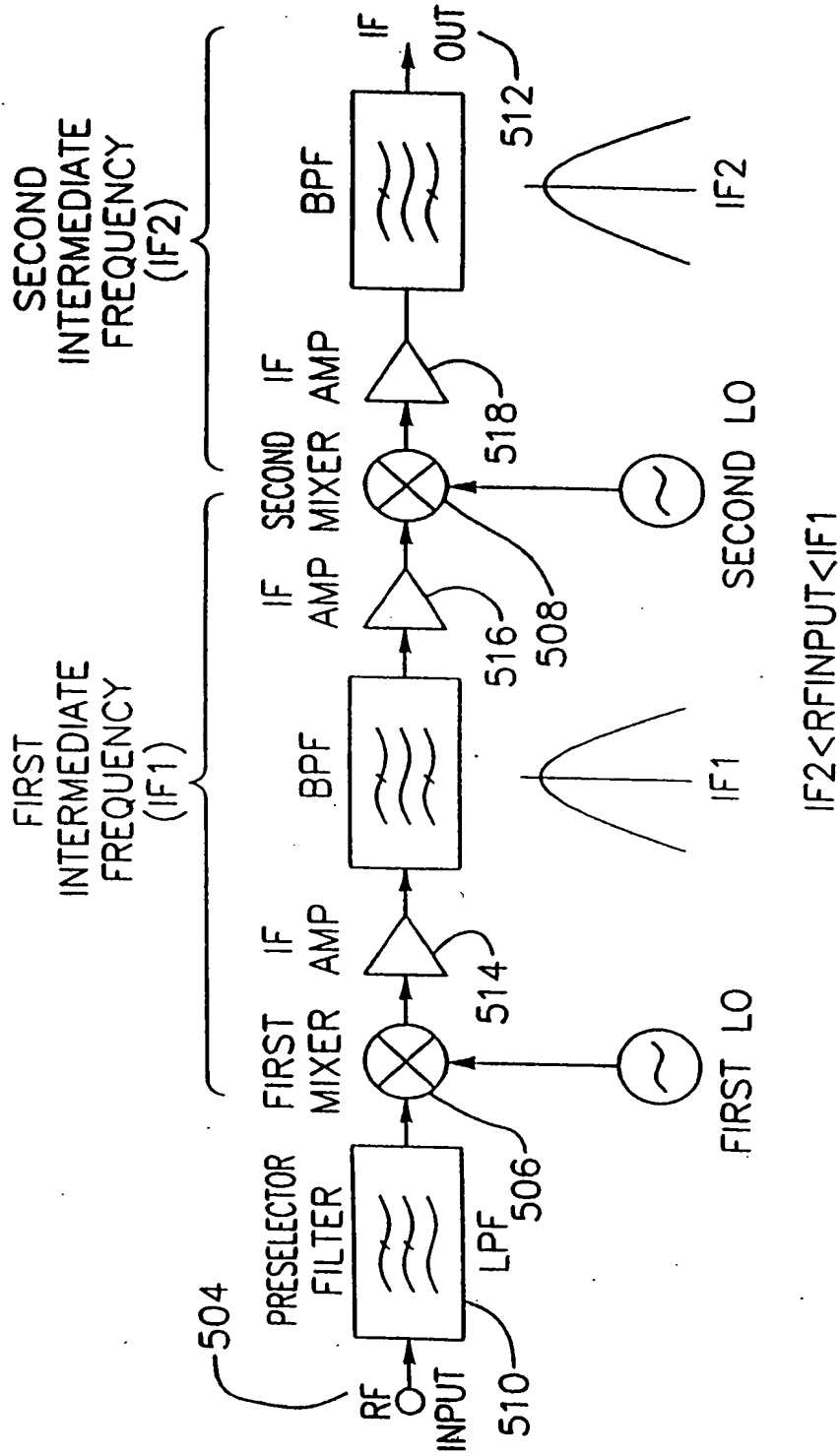
**FIG. 3**  
PRIOR ART



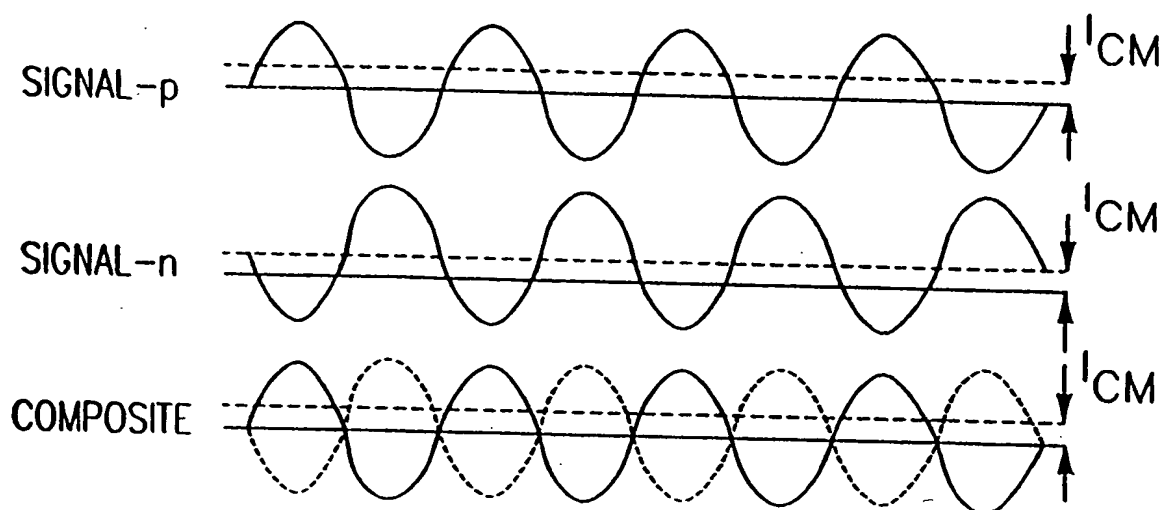
**FIG. 4**  
PRIOR ART



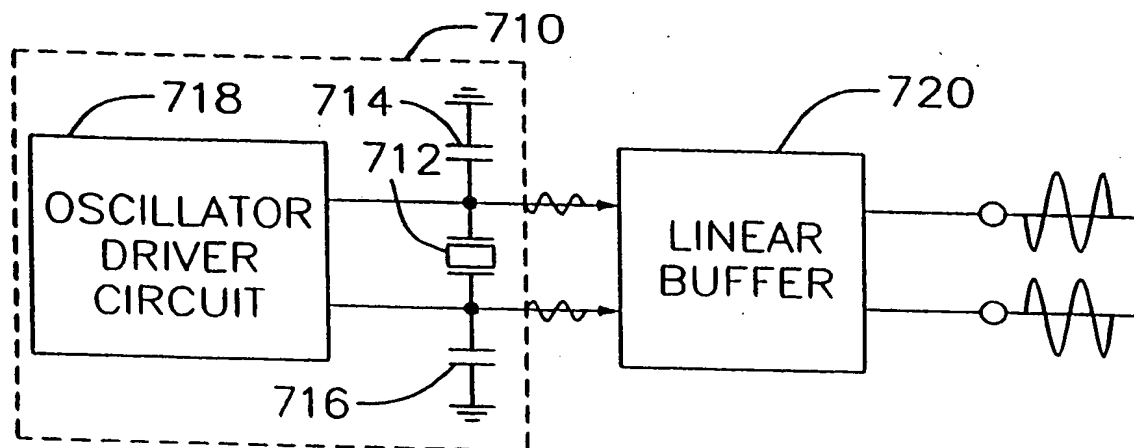
**FIG.5**  
 DUAL CONVERSION RECEIVER



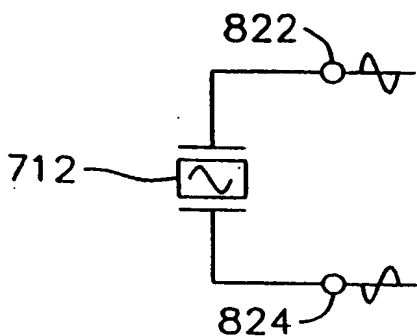
**FIG. 6**



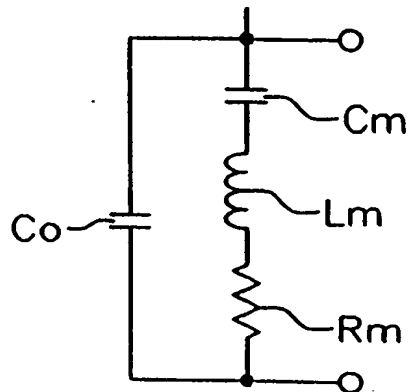
**FIG. 7**



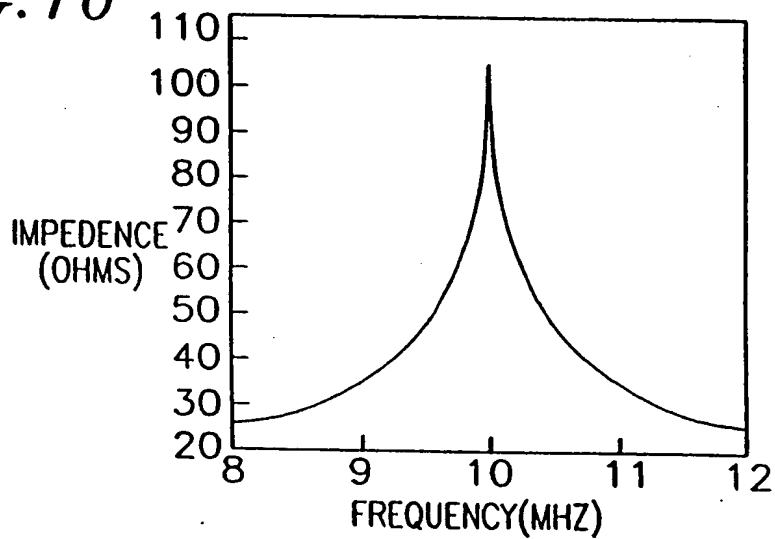
**FIG. 8**



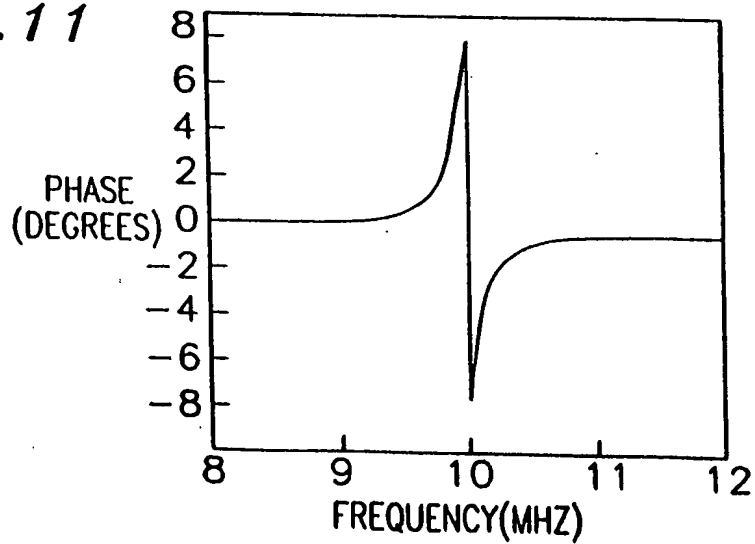
**FIG. 9**



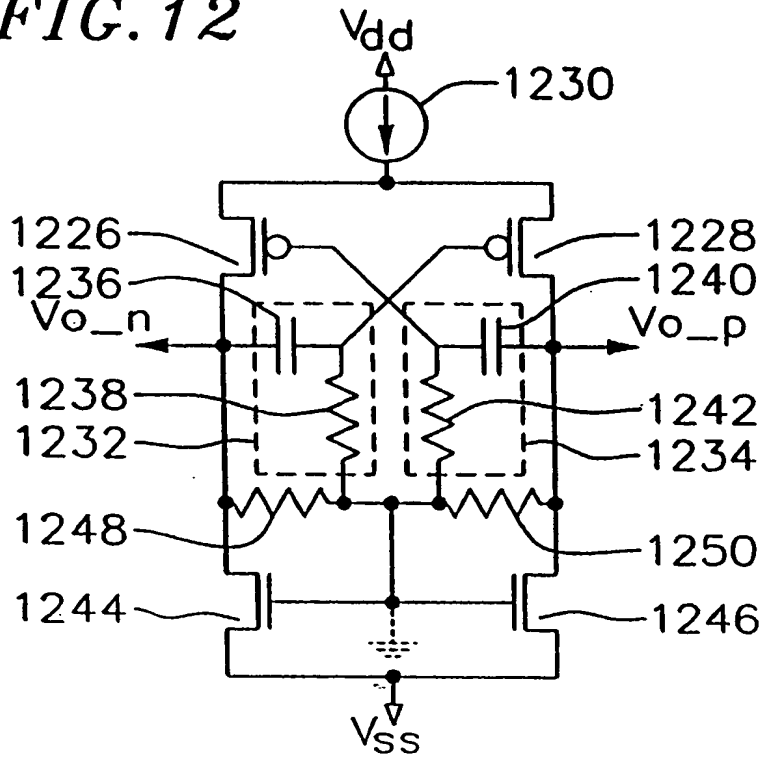
**FIG. 10**



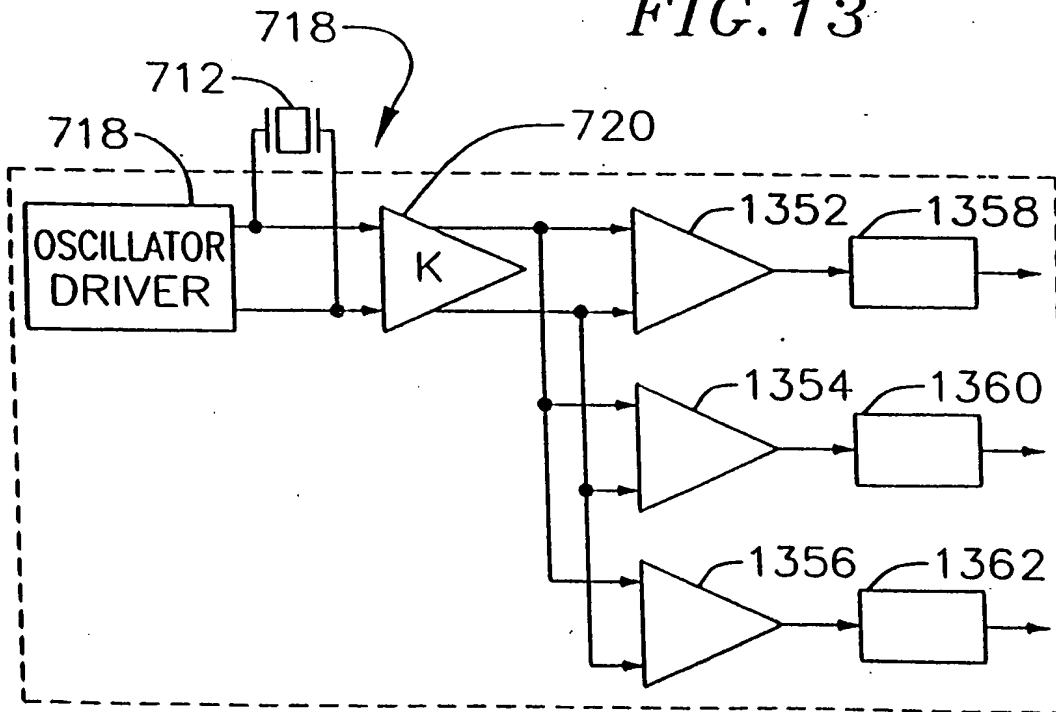
**FIG. 11**



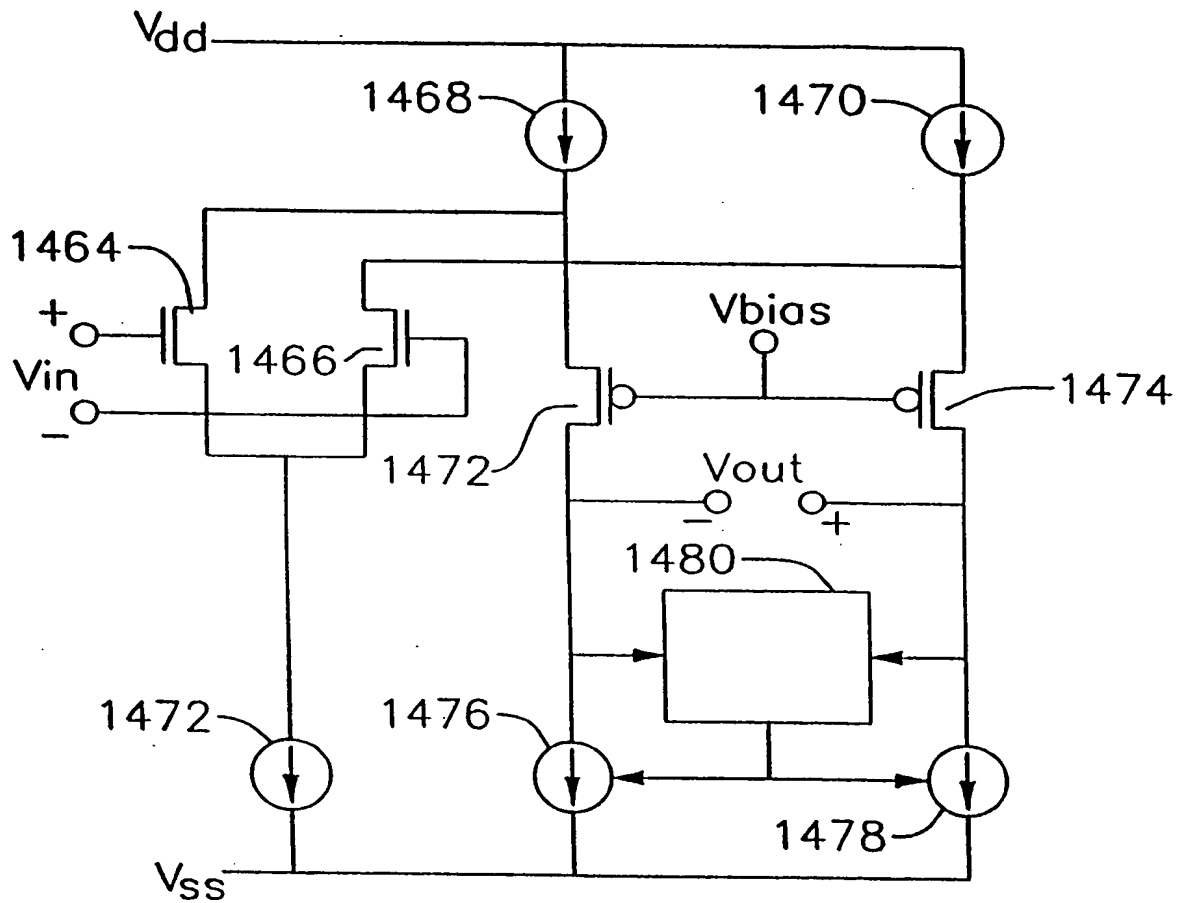
**FIG. 12**



**FIG. 13**

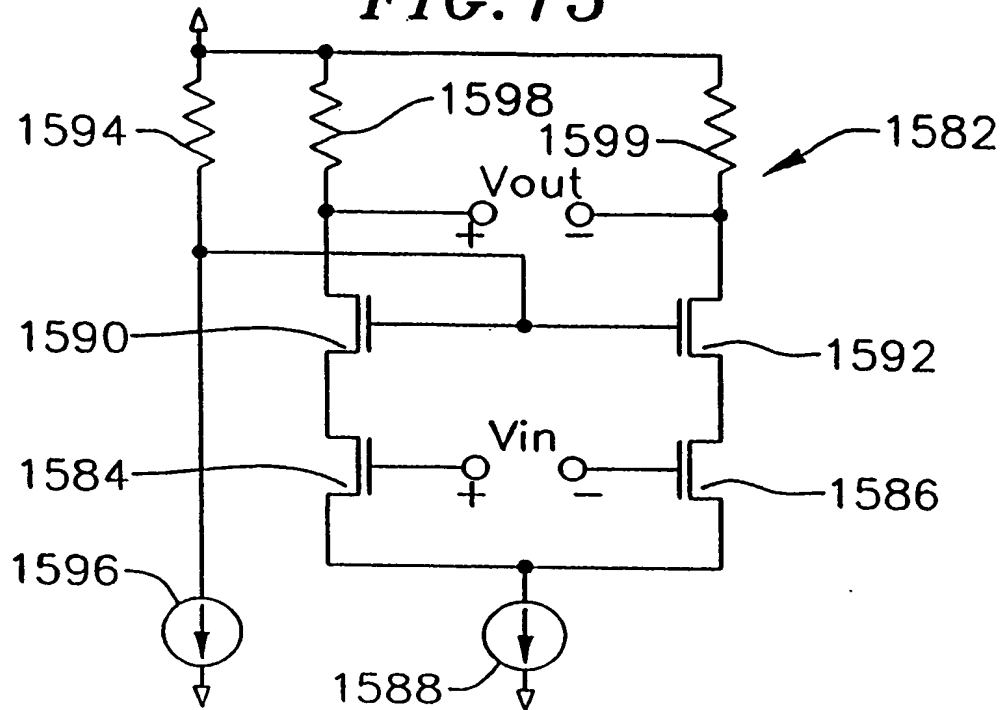


**FIG. 14**

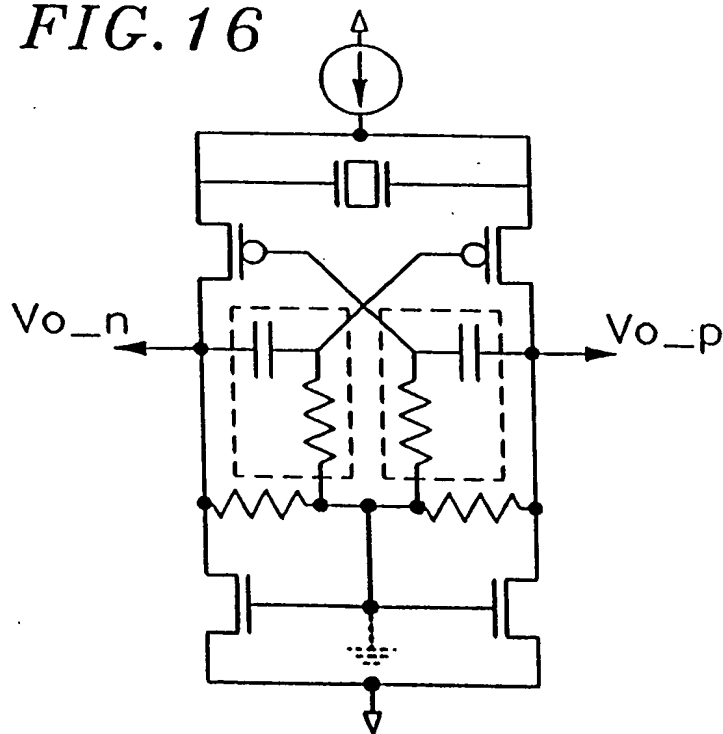




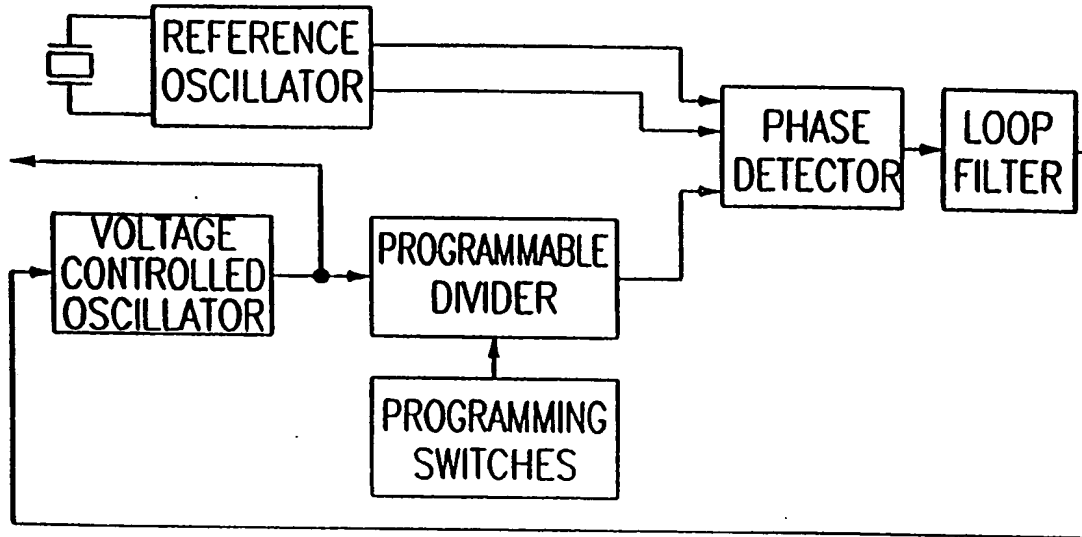
**FIG. 15**



**FIG. 16**



*FIG. 17*



*FIG. 18*

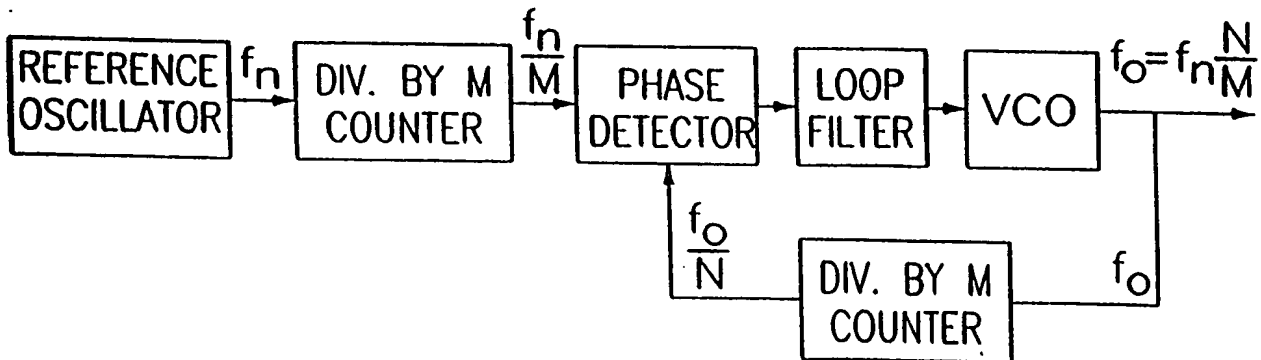


FIG. 19

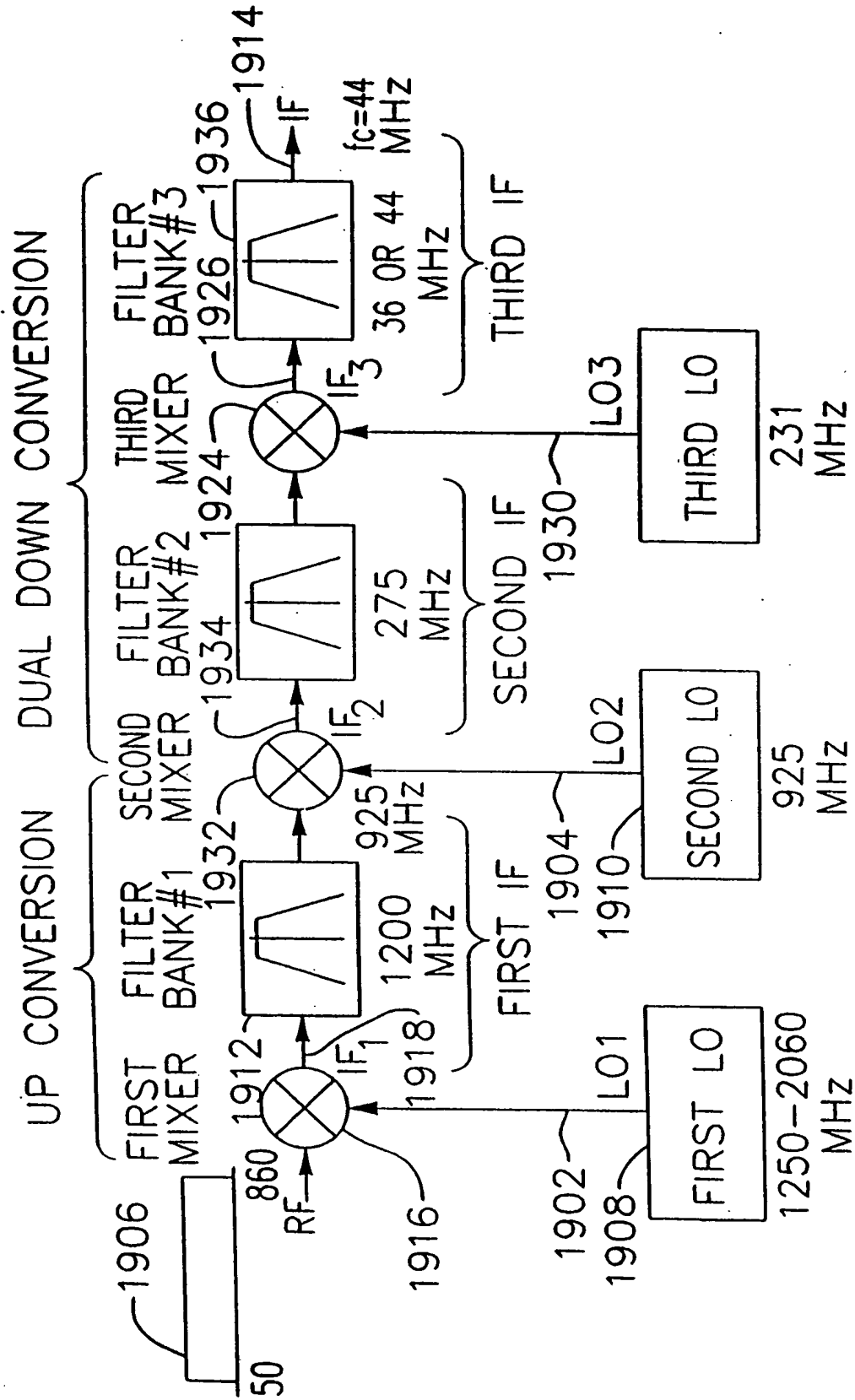
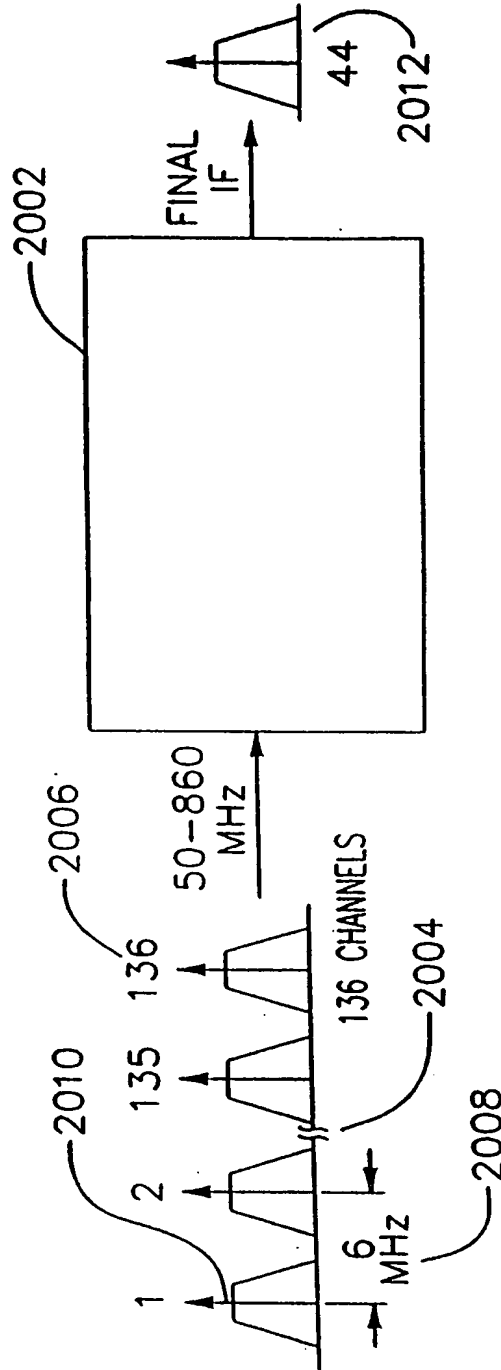


FIG. 20



**FIG. 21**

PPL Xtal REFERENCE=10MHz  
 LO-1, 10MHz FREQUENCY STEPS  
 LO-2, 100kHz FREQUENCY STEPS

44MHz IF

**NOTE**

• LO-2 REF=100KHz  
 SO DIVIDE RANGE=9216 TO 9280

TABLE OF FREQUENCIES BASED ON  
 COARSE/FINE PLL SOLUTION:

Frf (MHz)	50	56	62	68	74	80	86	92	98	104	110	116	122	128	"	854	860
LO-1 (MHz)	1250	1260	1260	1270	1270	1280	1290	1290	1300	1300	1310	1320	1320	1330	"	2050	2060
IF-1 (MHz)	1200	1204	1198	1202	1196	1200	1204	1198	1202	1196	1200	1204	1198	1202	"	1196	1200
LO-2 (MHz)	924.8	928.0	923.2	926.4	921.6	924.8	928.0	923.2	926.4	921.6	924.8	928.0	923.2	926.4	"	921.6	924.8
IF-2 (MHz)	275.2	276	274.8	275.6	274.4	275.2	276.0	274.8	275.6	274.4	275.2	276.0	274.8	275.6	"	274.4	275.2
LO-3 (MHz)	231.2	232	230.8	232	230	231	232	231	232	230	231	232	231	232	"	230	231
IF-3 (MHz)	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	"	44.0	44.0

FIG. 22

PPL Xtol REFERENCE=10MHz  
 LO-1, 10MHz FREQUENCY STEPS  
 LO-2, 100kHz FREQUENCY STEPS

36MHz IF

NOTE

• LO-2 REF=100KHz

SO DIVIDE RANGE=9280 TO 9340

TABLE OF FREQUENCIES BASED ON  
 COARSE/FINE PLL SOLUTION:

Frq (MHz)	50	58	66	74	82	90	98	106	114	122	130	138	146	154	"	852	860
LO-1 (MHz)	1250	1260	1270	1270	1280	1290	1300	1310	1310	1320	1330	1340	1350	1350	"	2050	2060
IF-1 (MHz)	1200	1202	1204	1196	1198	1200	1202	1204	1196	1198	1200	1202	1204	1196	"	1198	1200
LO-2 (MHz)	931.2	932.8	934.4	928.0	930	931	933	934	928.0	930	931	933	934	928.0	"	929.60	931.2
IF-2 (MHz)	268.8	269.2	269.6	268.0	268.4	268.8	269.2	269.6	268.0	268.4	268.8	269.2	269.6	268.0	"	268.4	268.8
LO-3 (MHz)	232.8	233.2	233.6	232	232	233	233	234	232	232	233	233	234	232.0	"	232.4	232.8
IF-3 (MHz)	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	"	36.0	36.0

*FIG. 23*

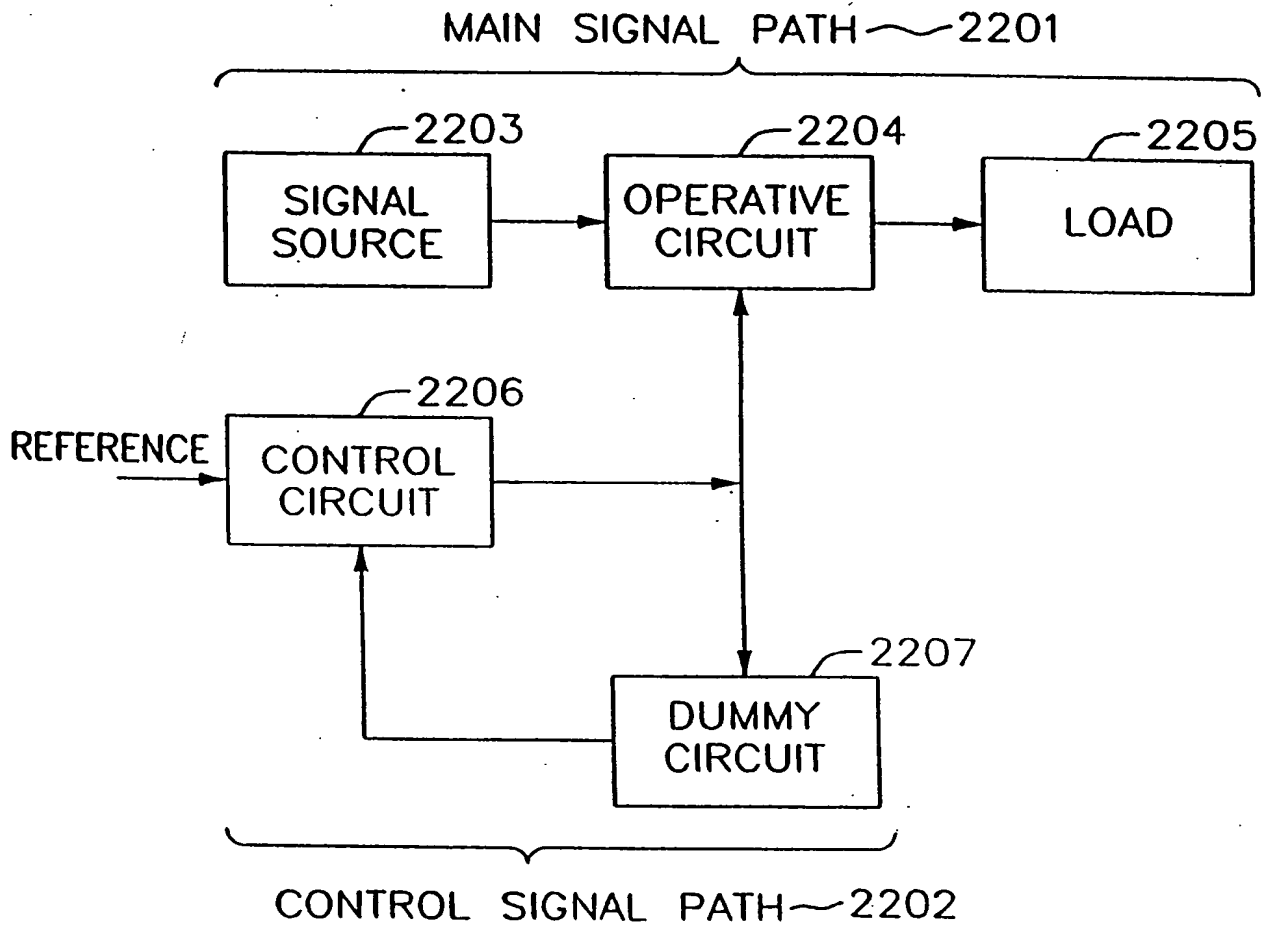


FIG. 24a

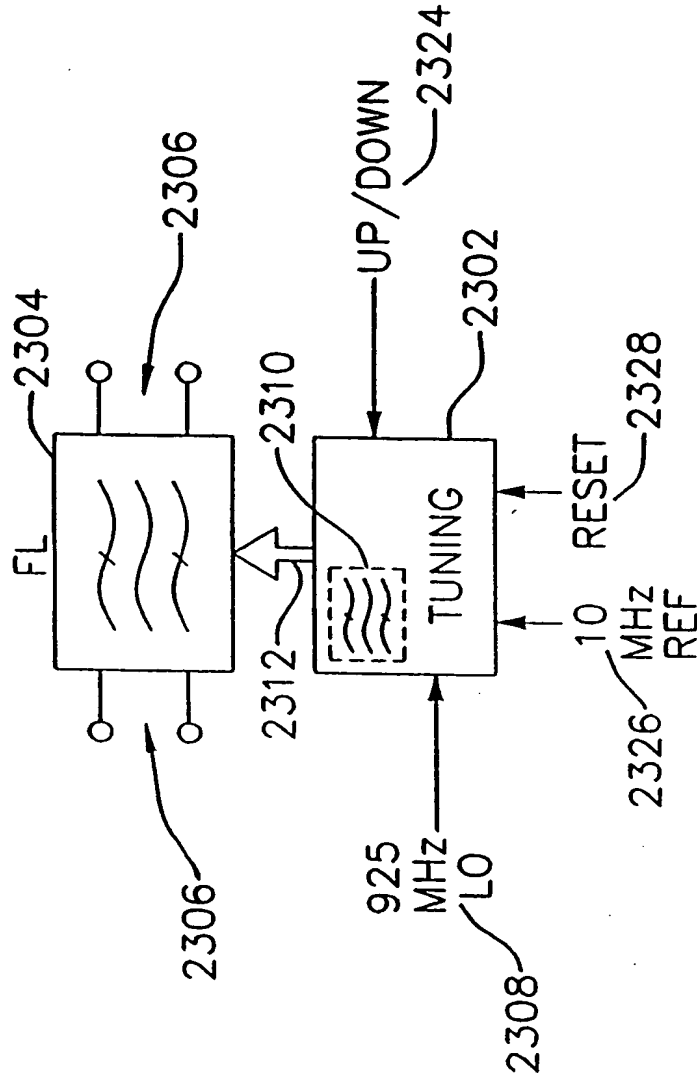




FIG. 24b

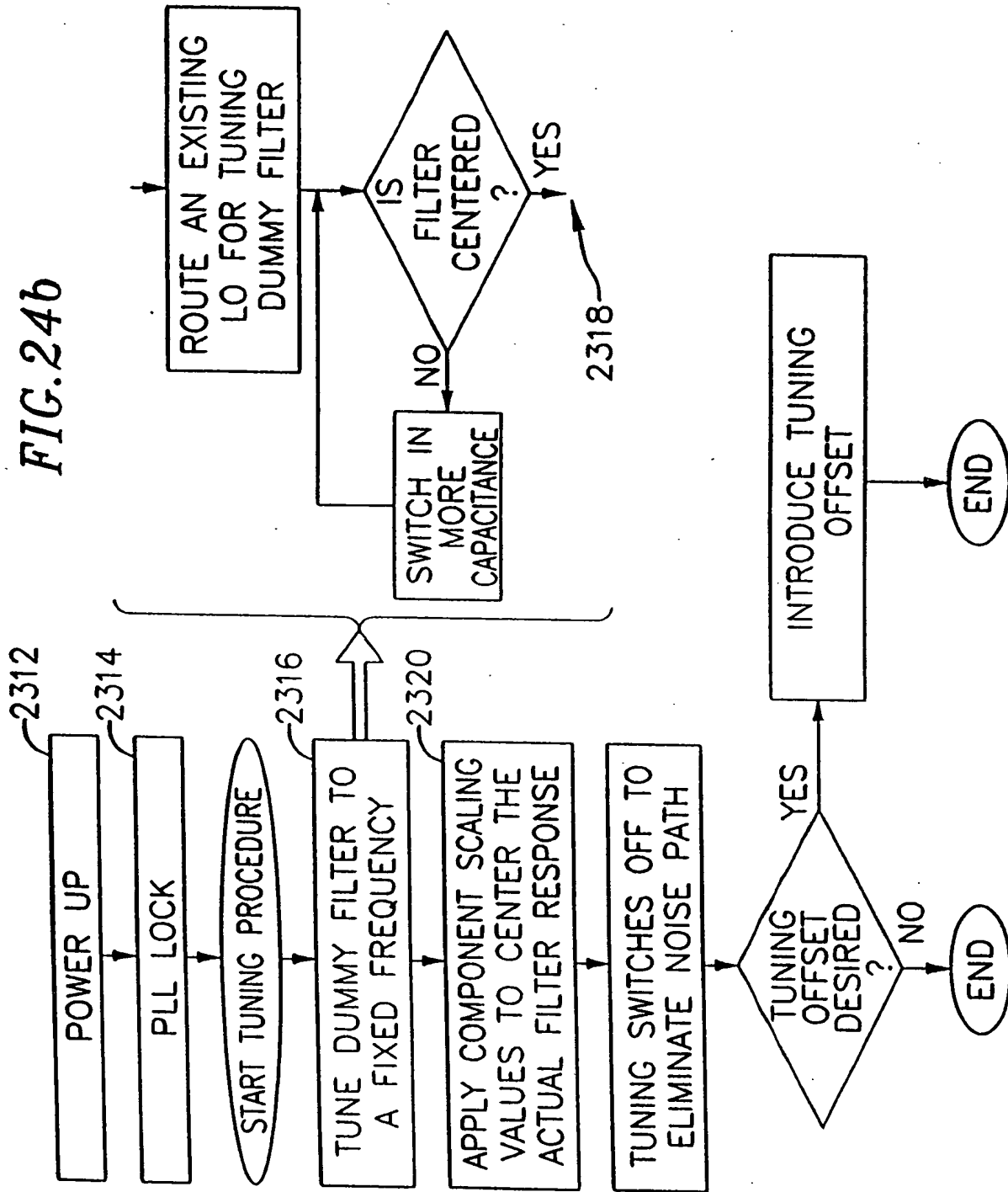


FIG. 24c

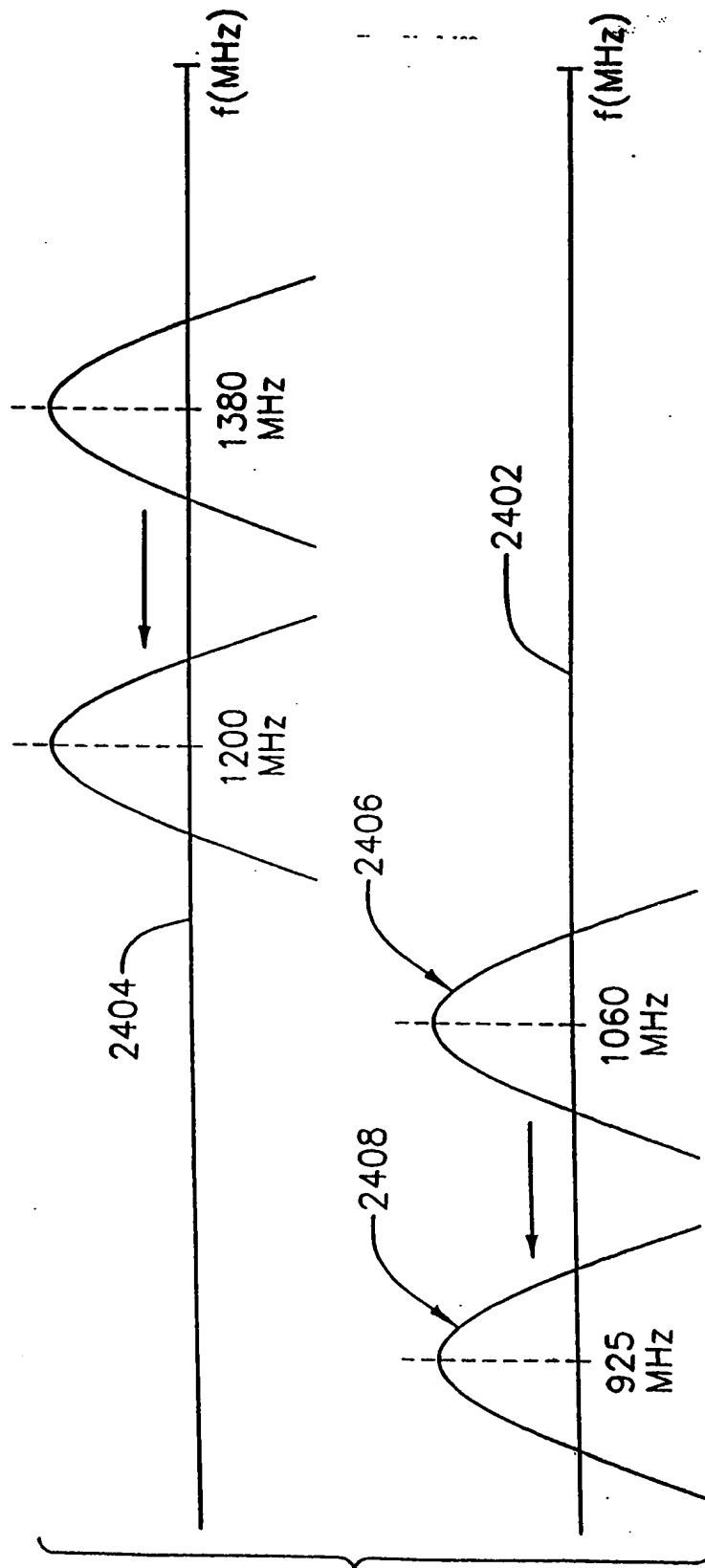
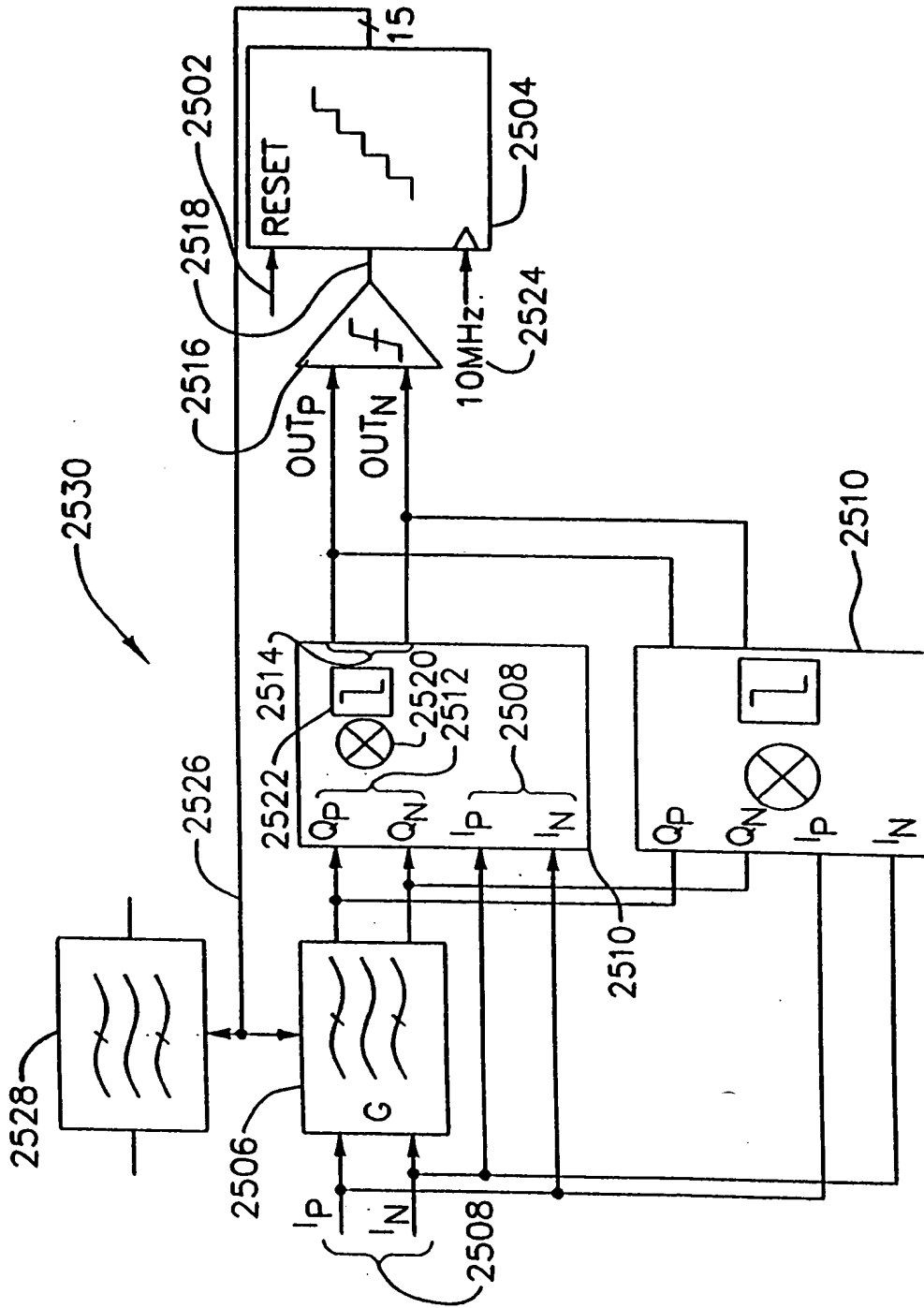
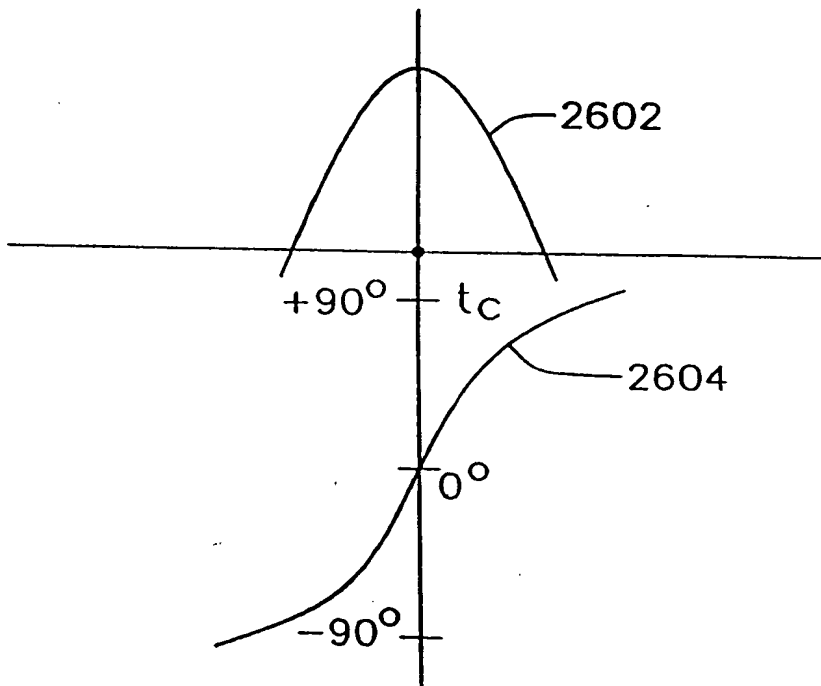
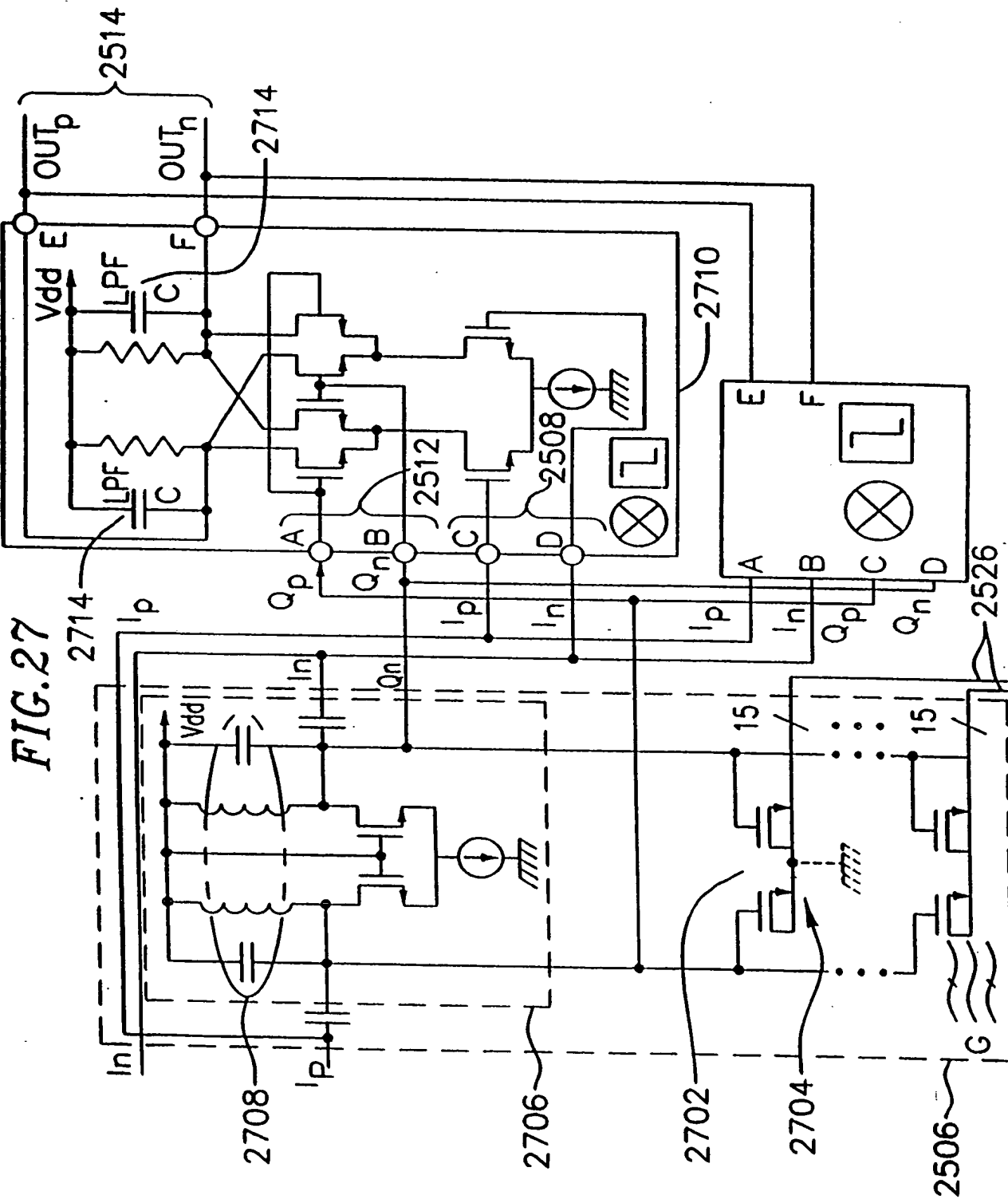


FIG. 25

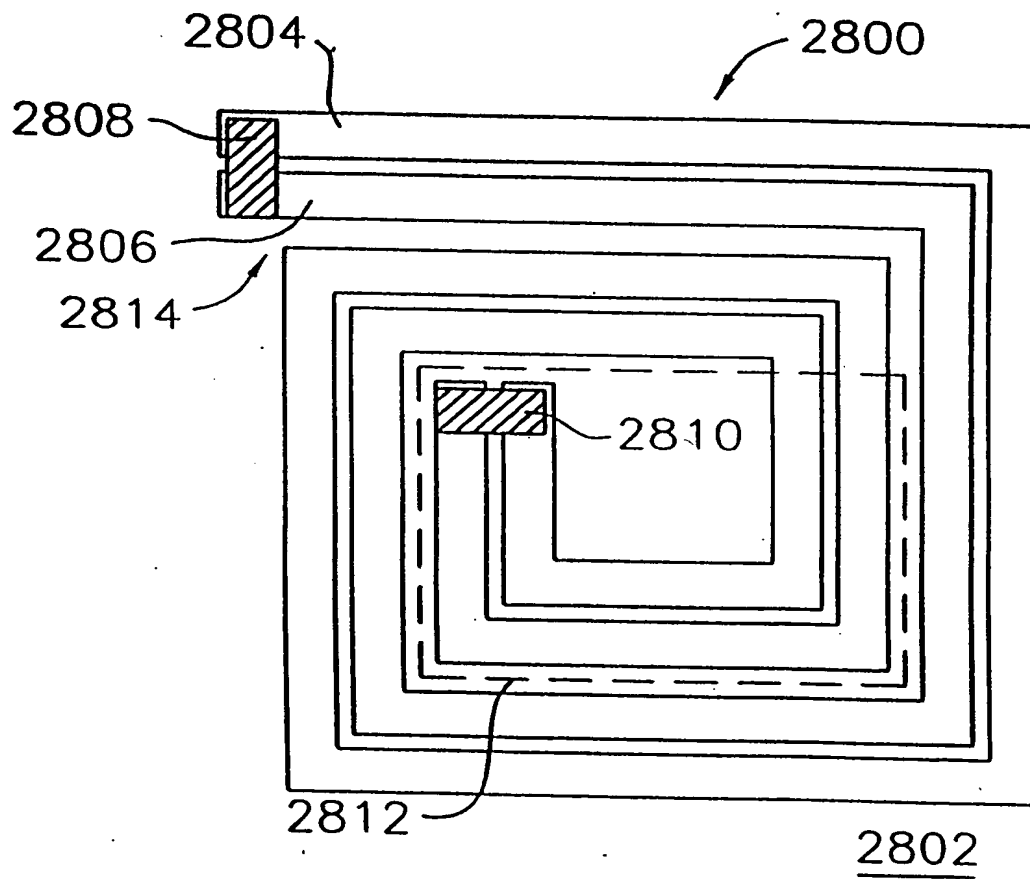


**FIG.26**





*FIG.28α*



**FIG.28b**

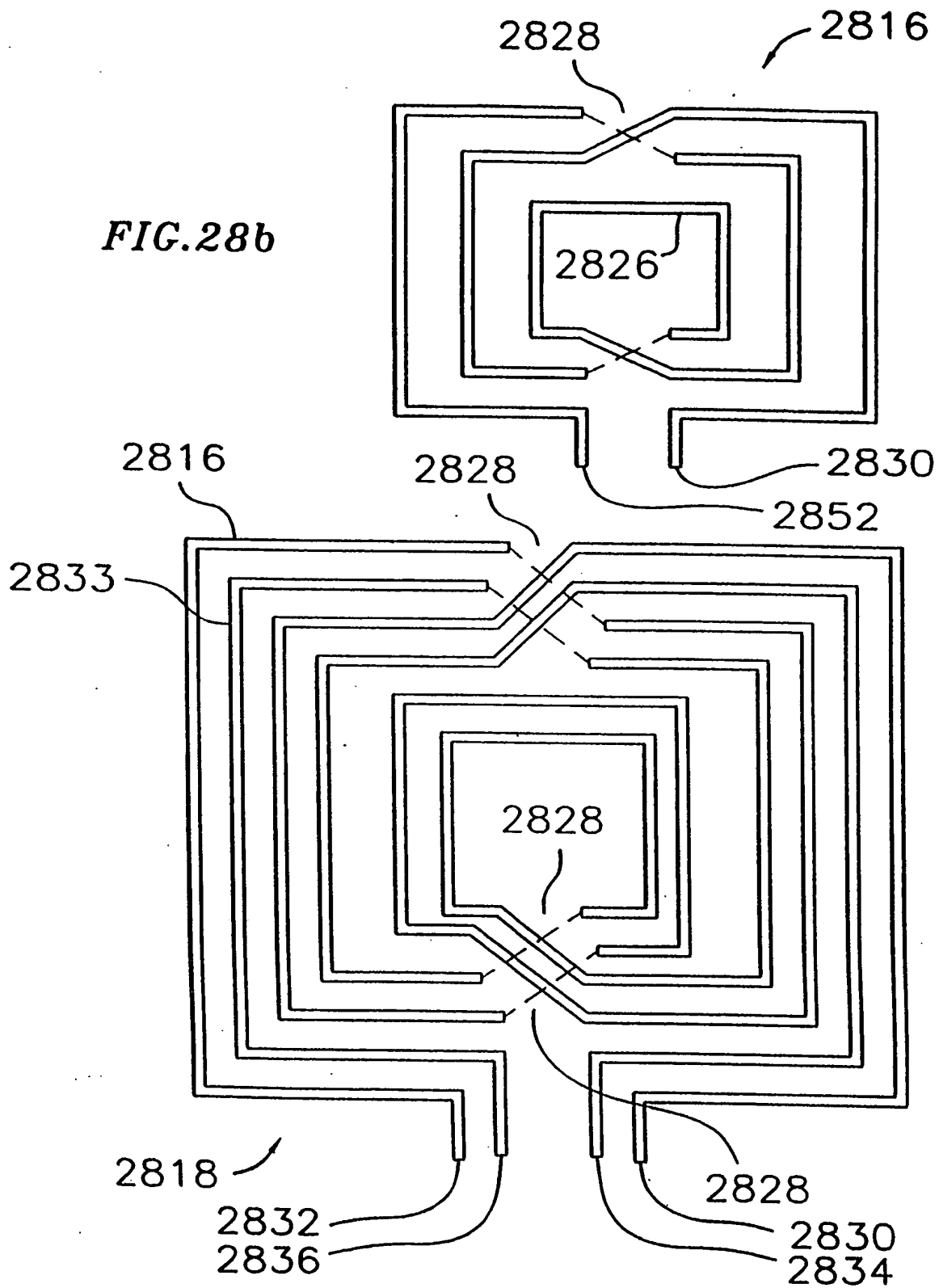


FIG. 28e

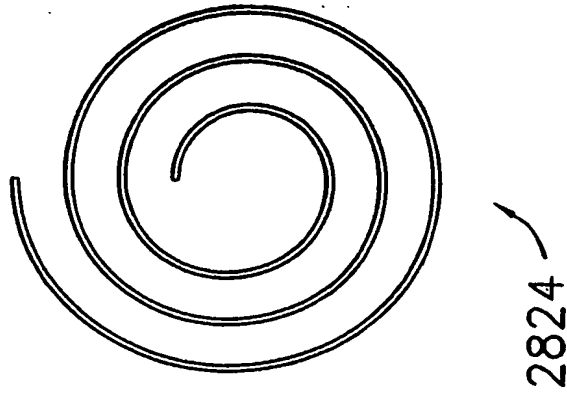


FIG. 28d

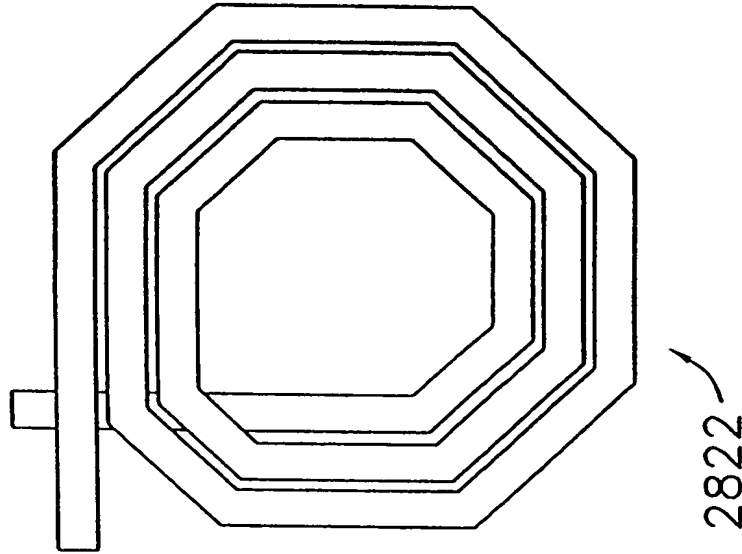
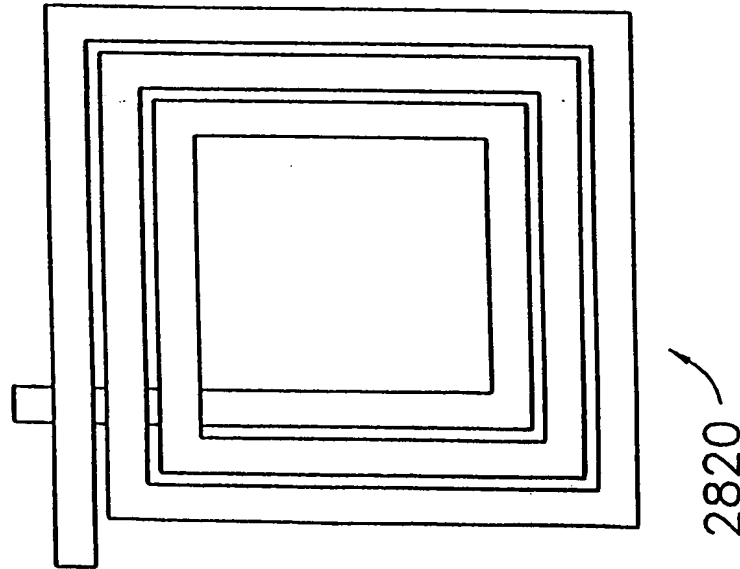
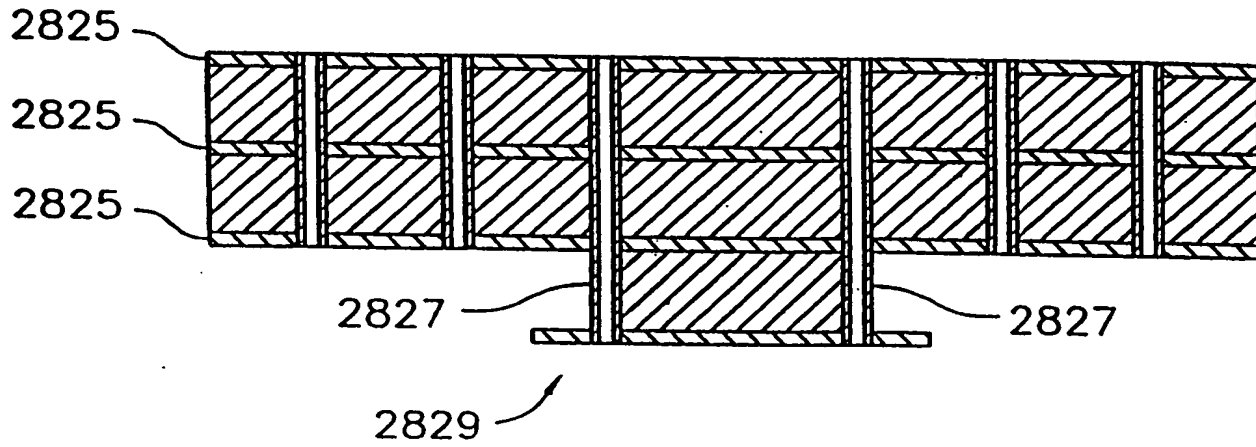


FIG. 28c

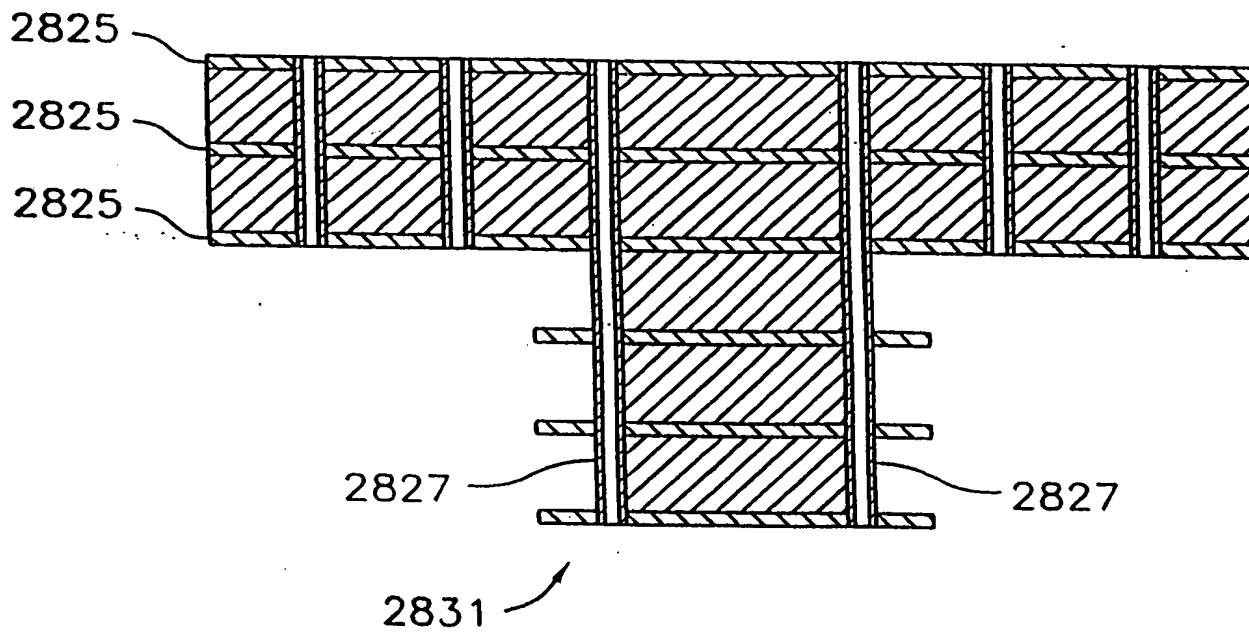




*FIG.28f*



*FIG.28g*



*FIG.28h*

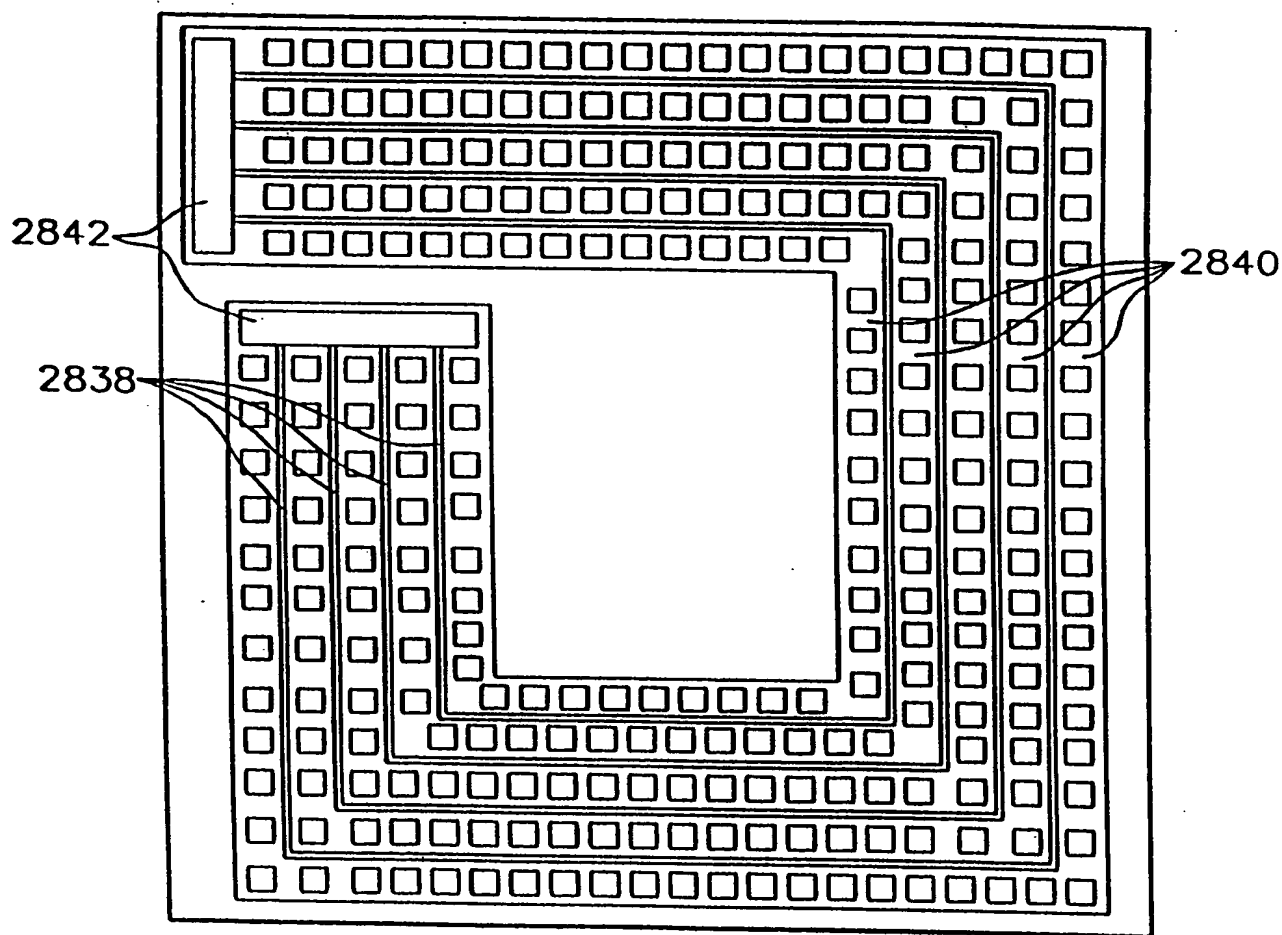


FIG. 28i

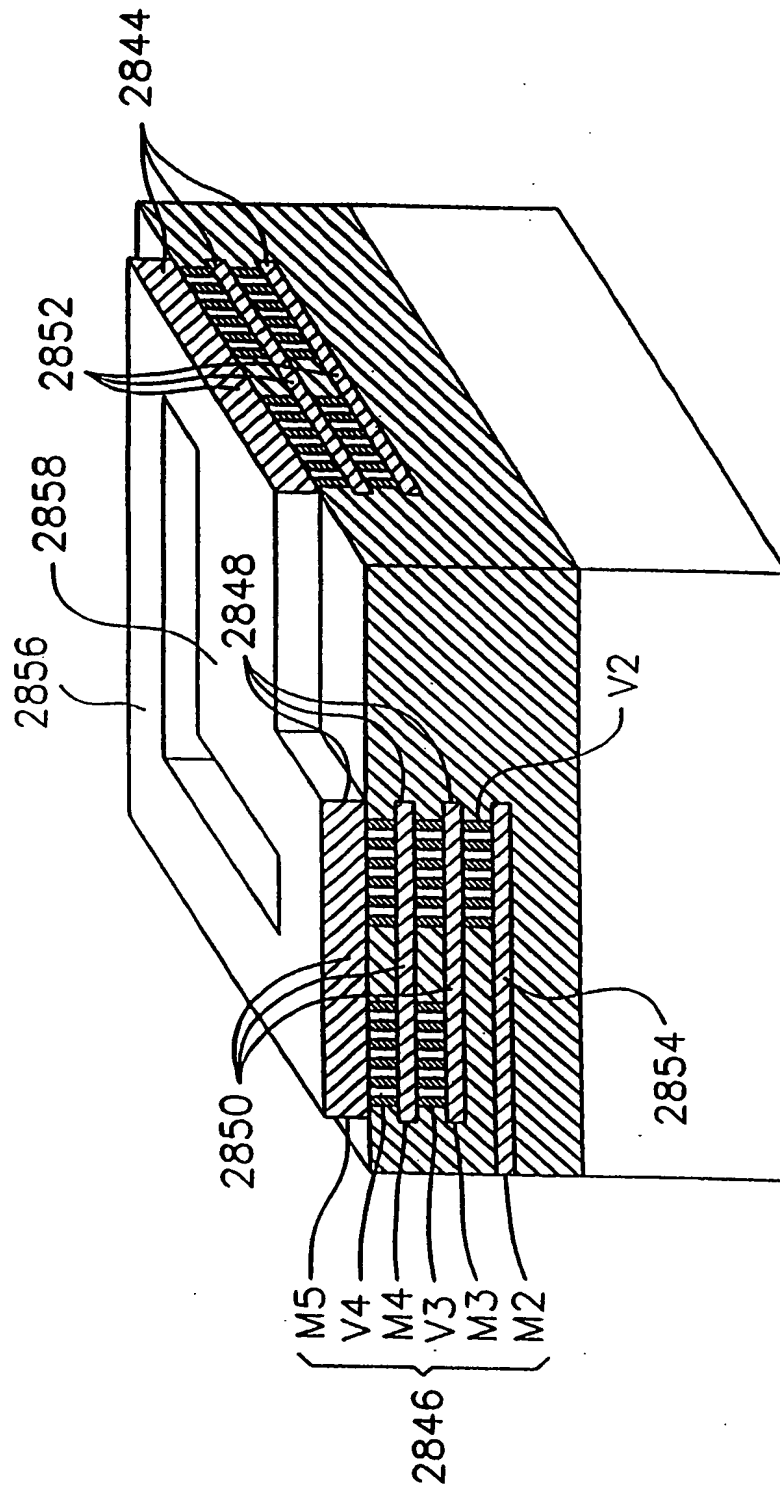
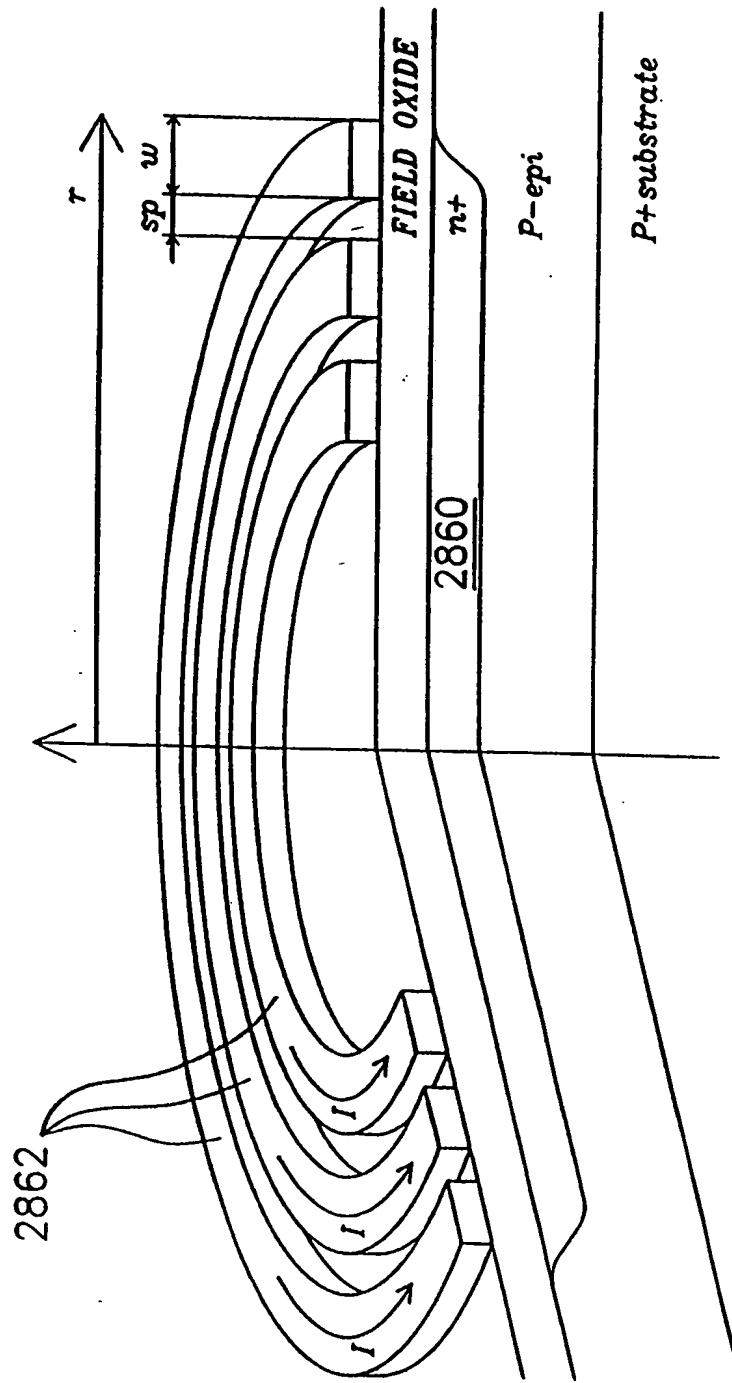
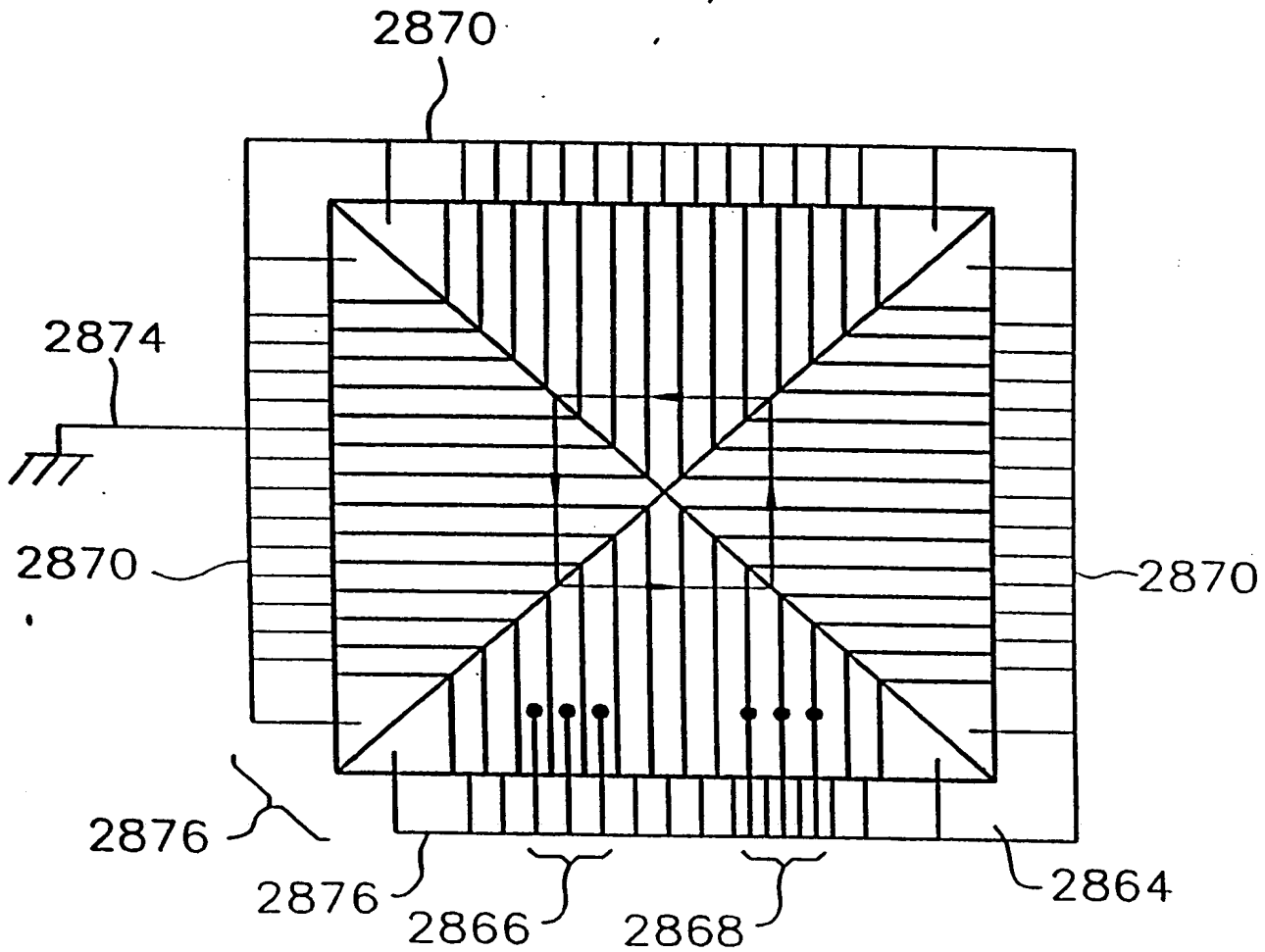


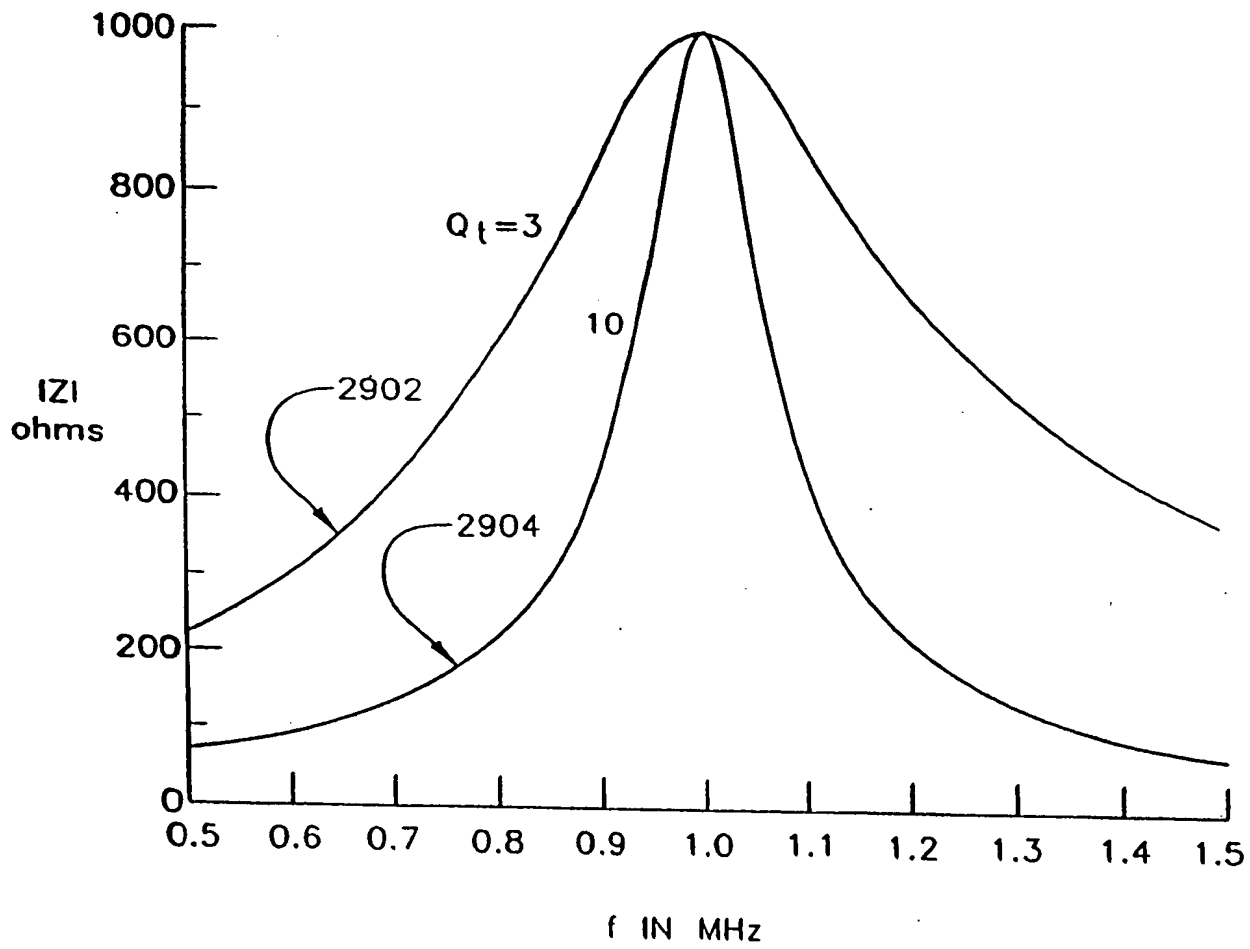
FIG. 28j



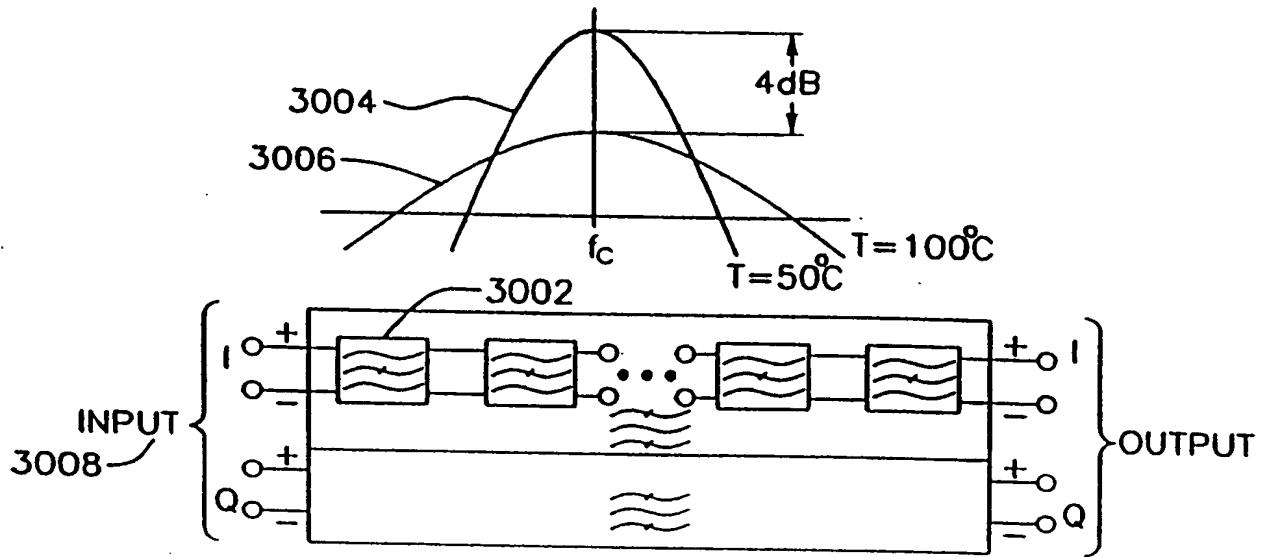
**FIG. 28k**



**FIG.29**



**FIG.30**



**FIG.31 $\alpha$**

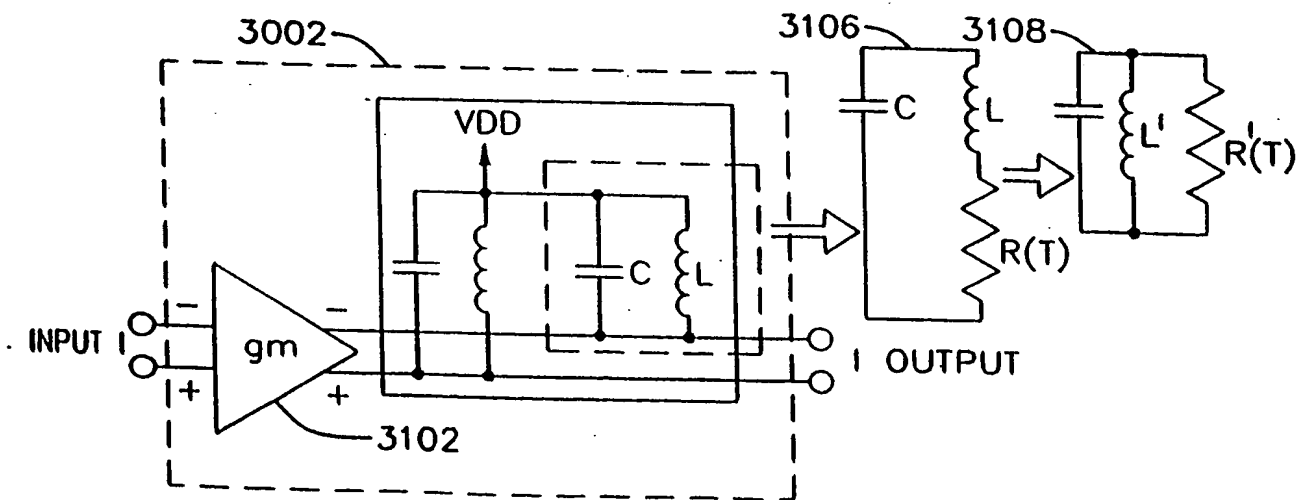


FIG. 316

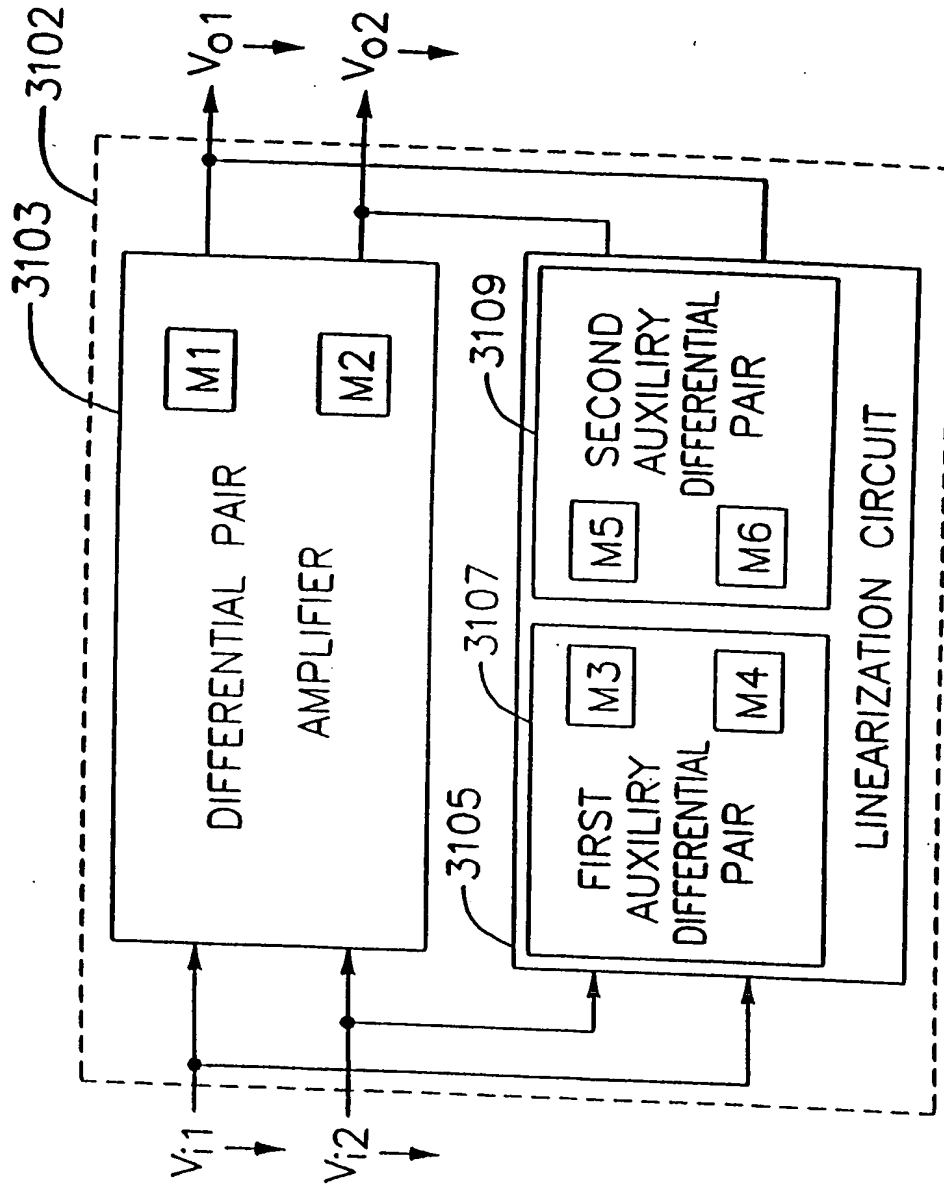




FIG. 31c

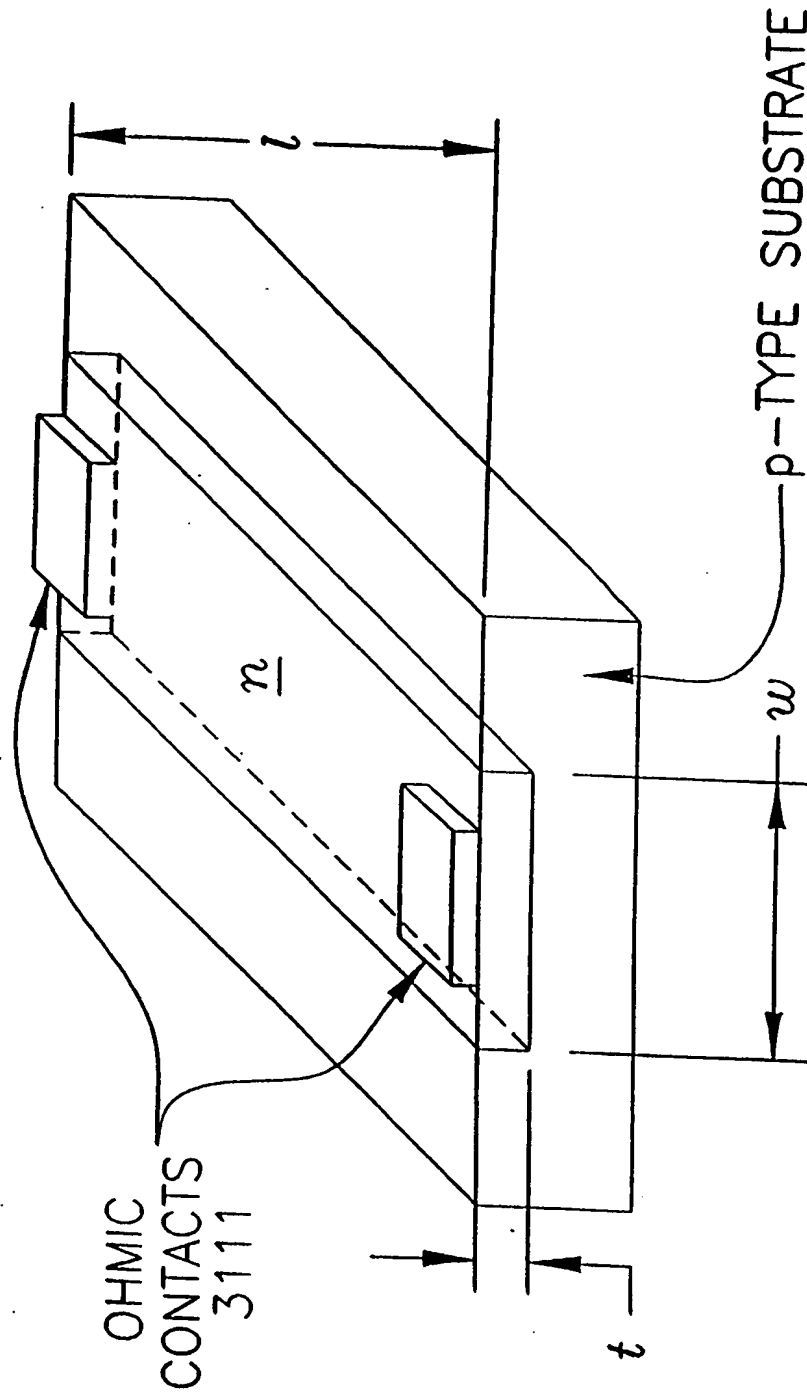
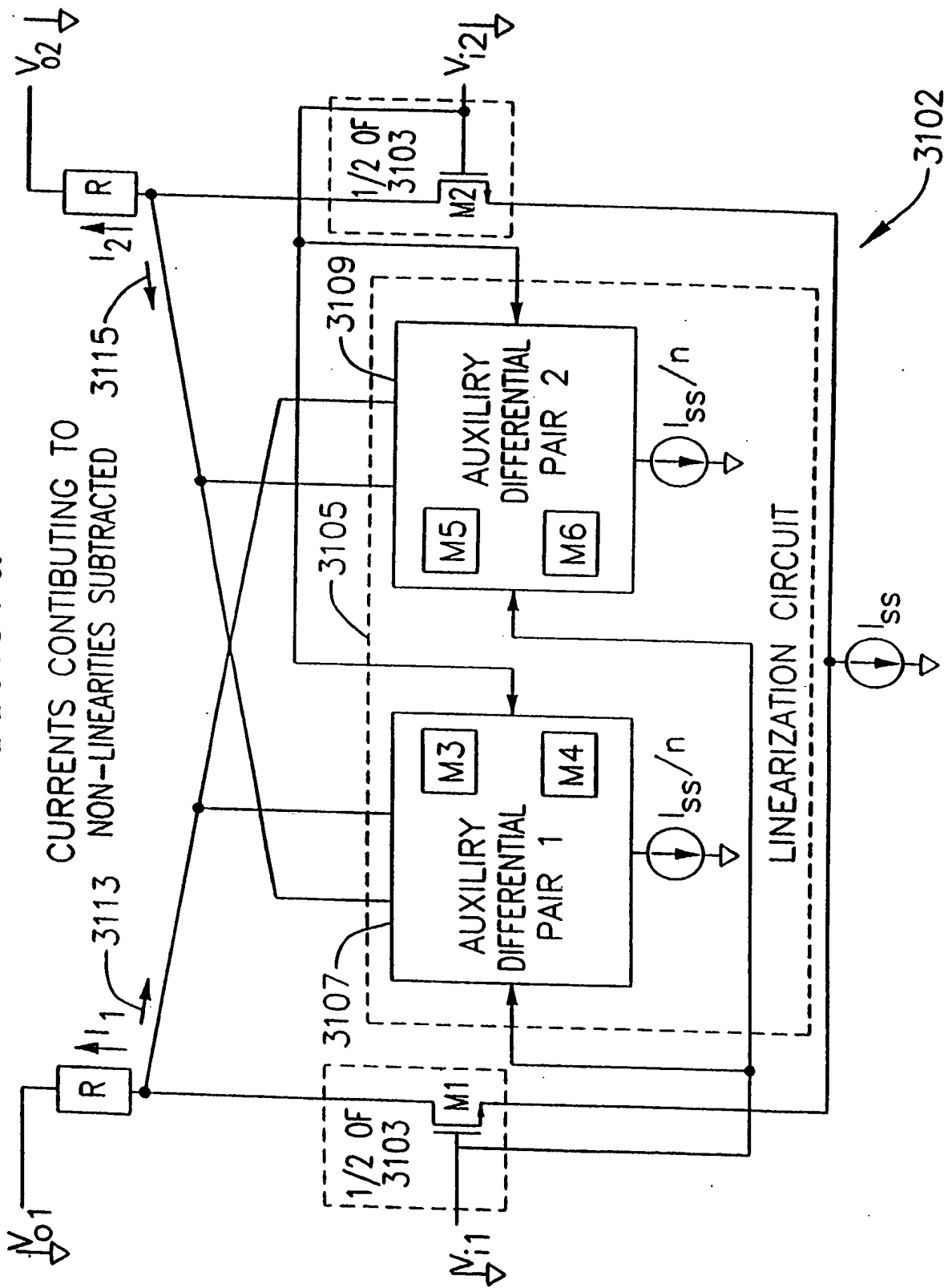


FIG. 31d



*FIG.31e*

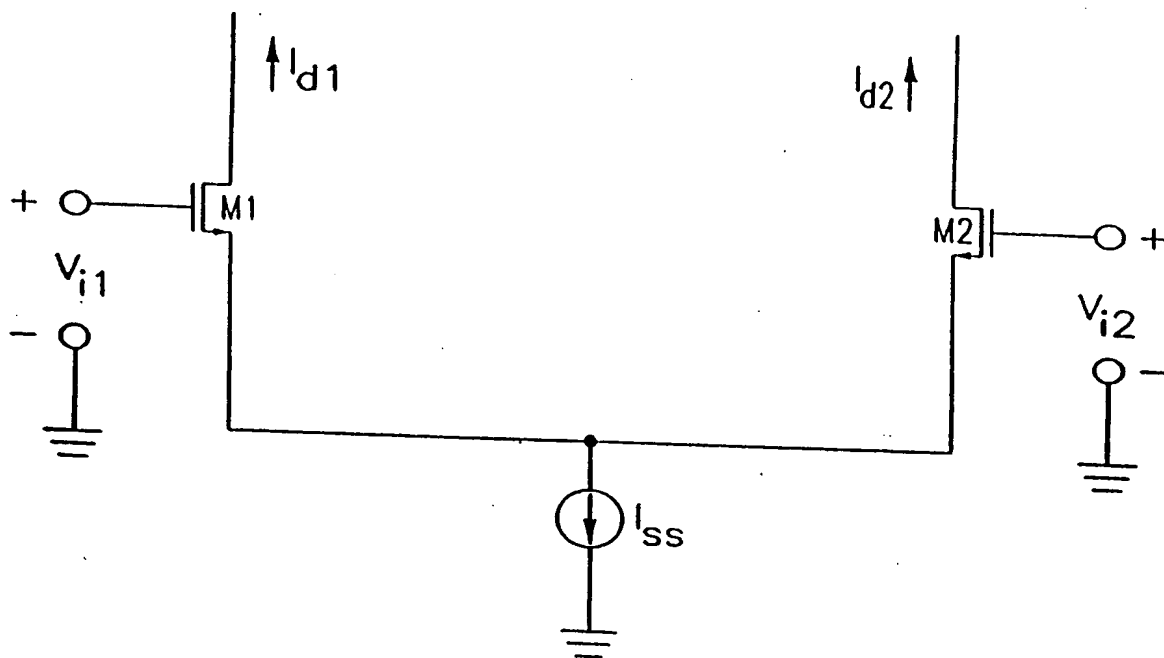


FIG. 31f

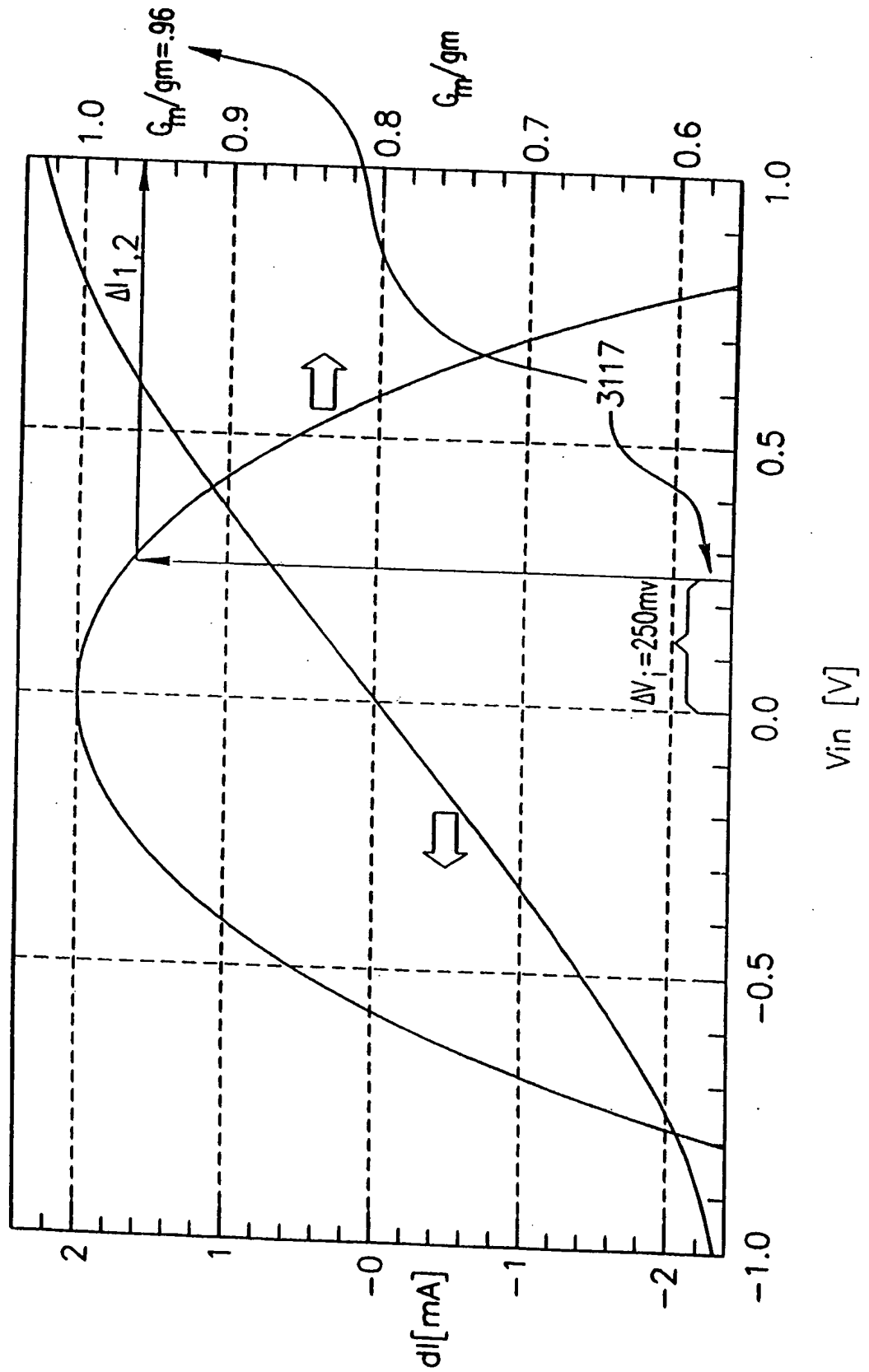


FIG. 31g

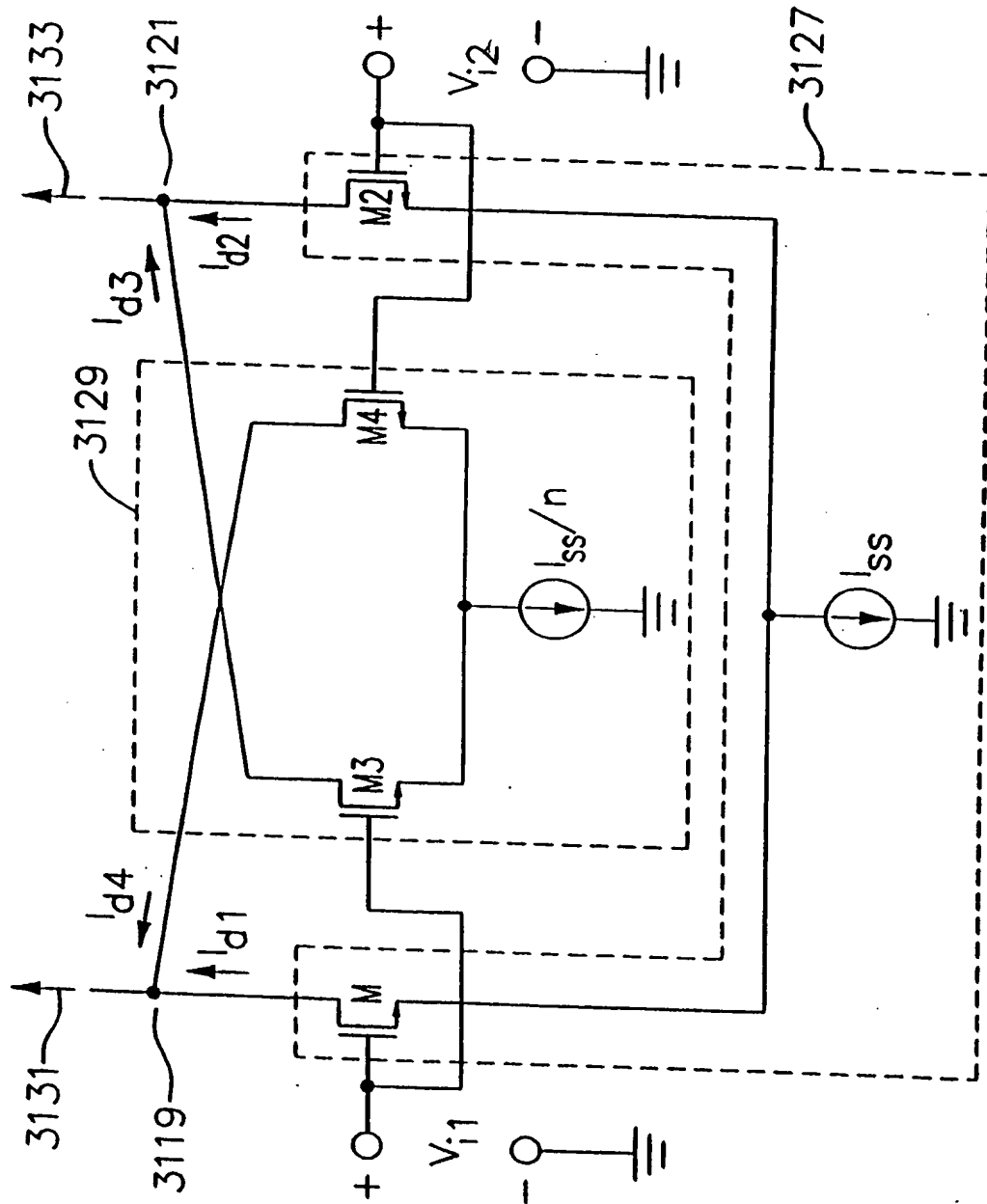
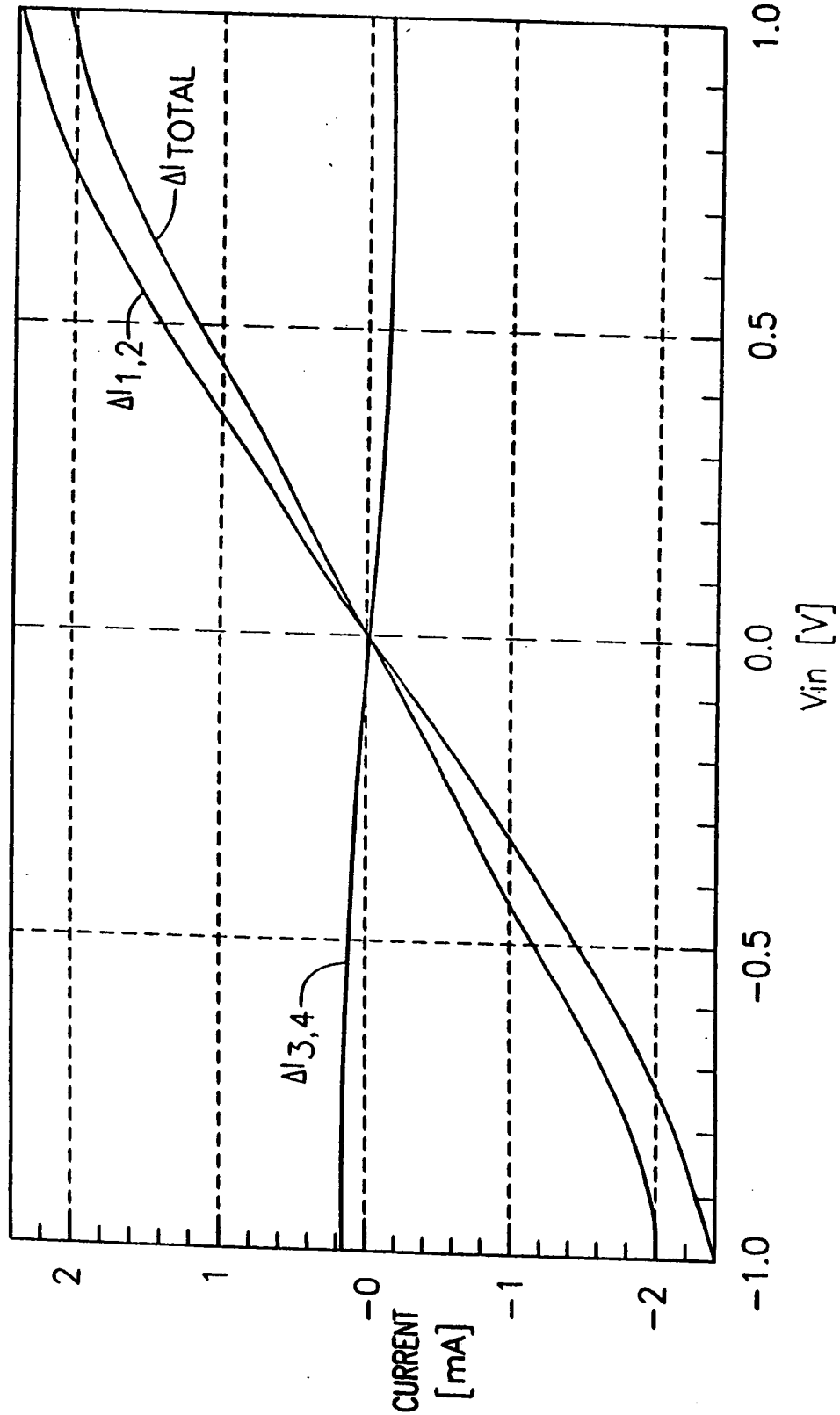

$$\begin{array}{r} 3125 \\ \hline \end{array} \quad \begin{array}{r} 3123 \\ \hline \end{array}$$

FIG. 31h



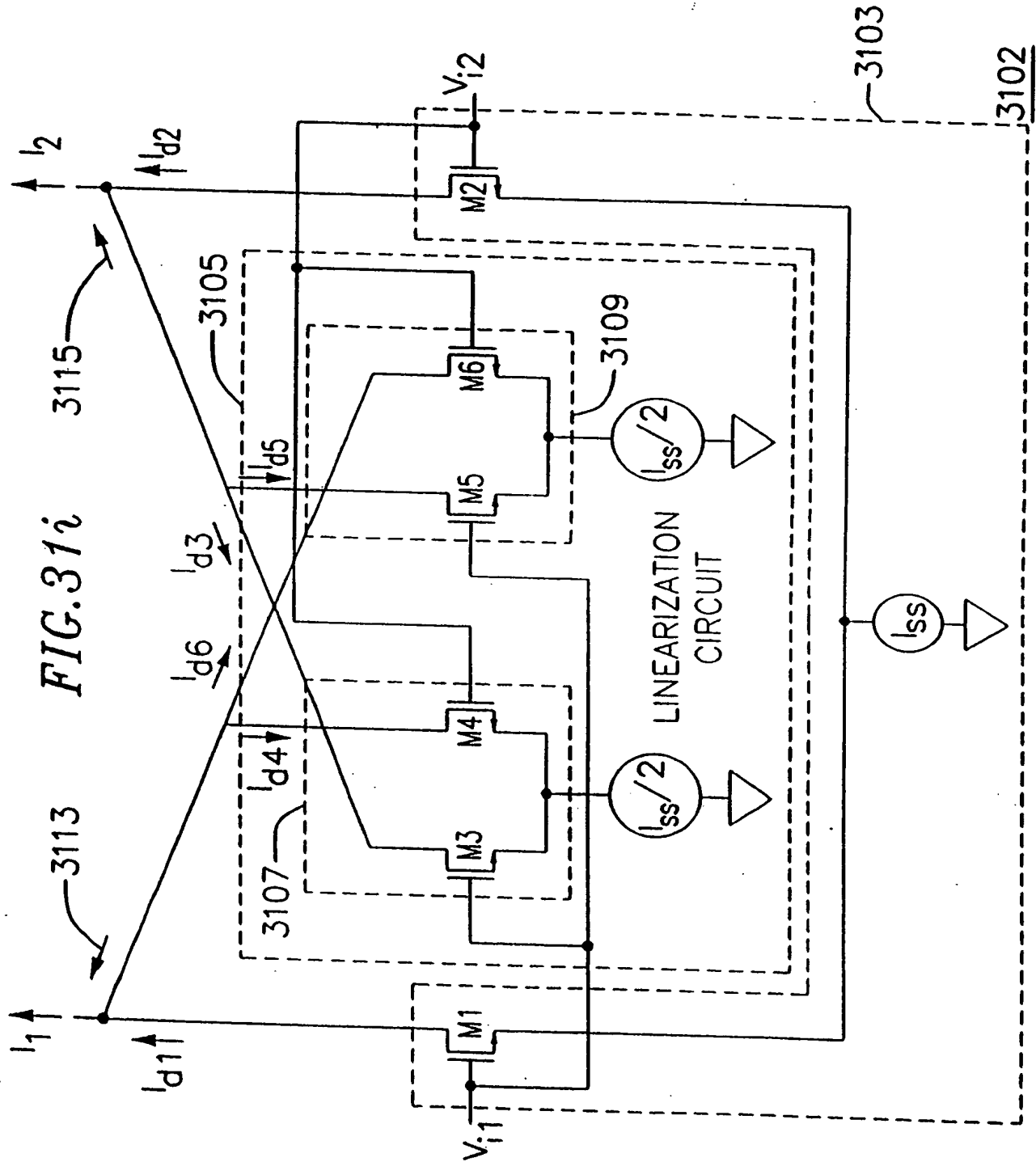


FIG. 31j

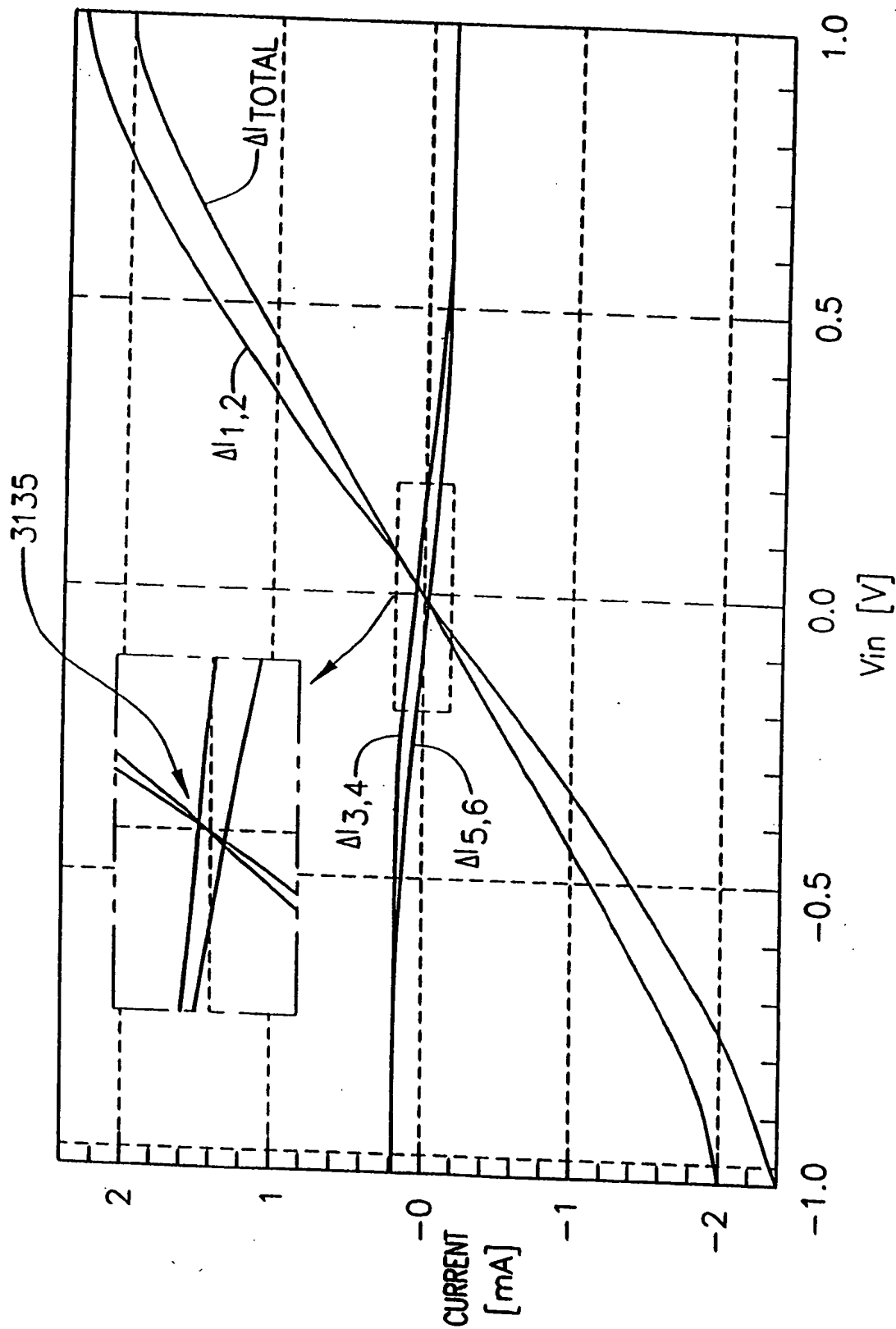
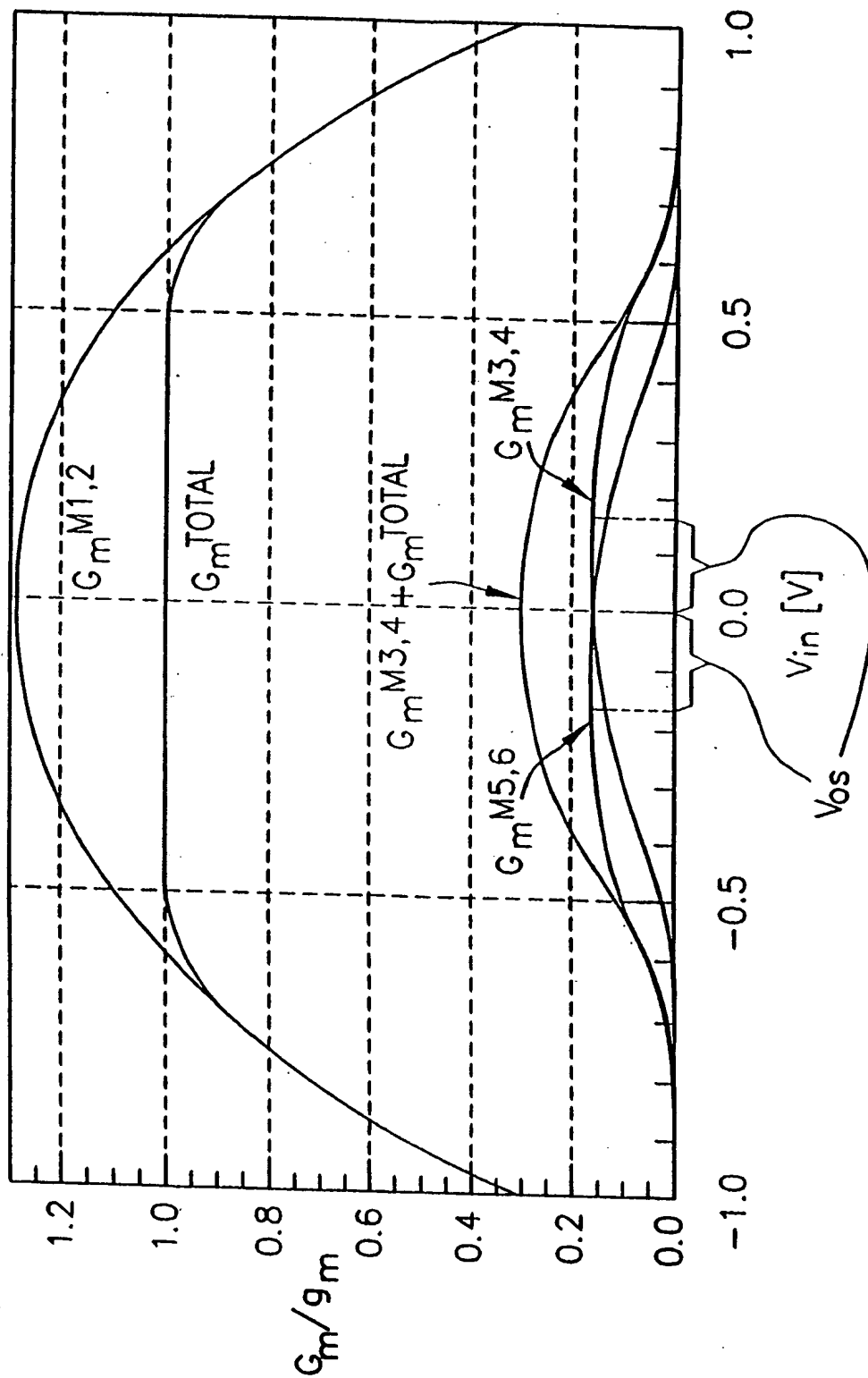




FIG. 31k



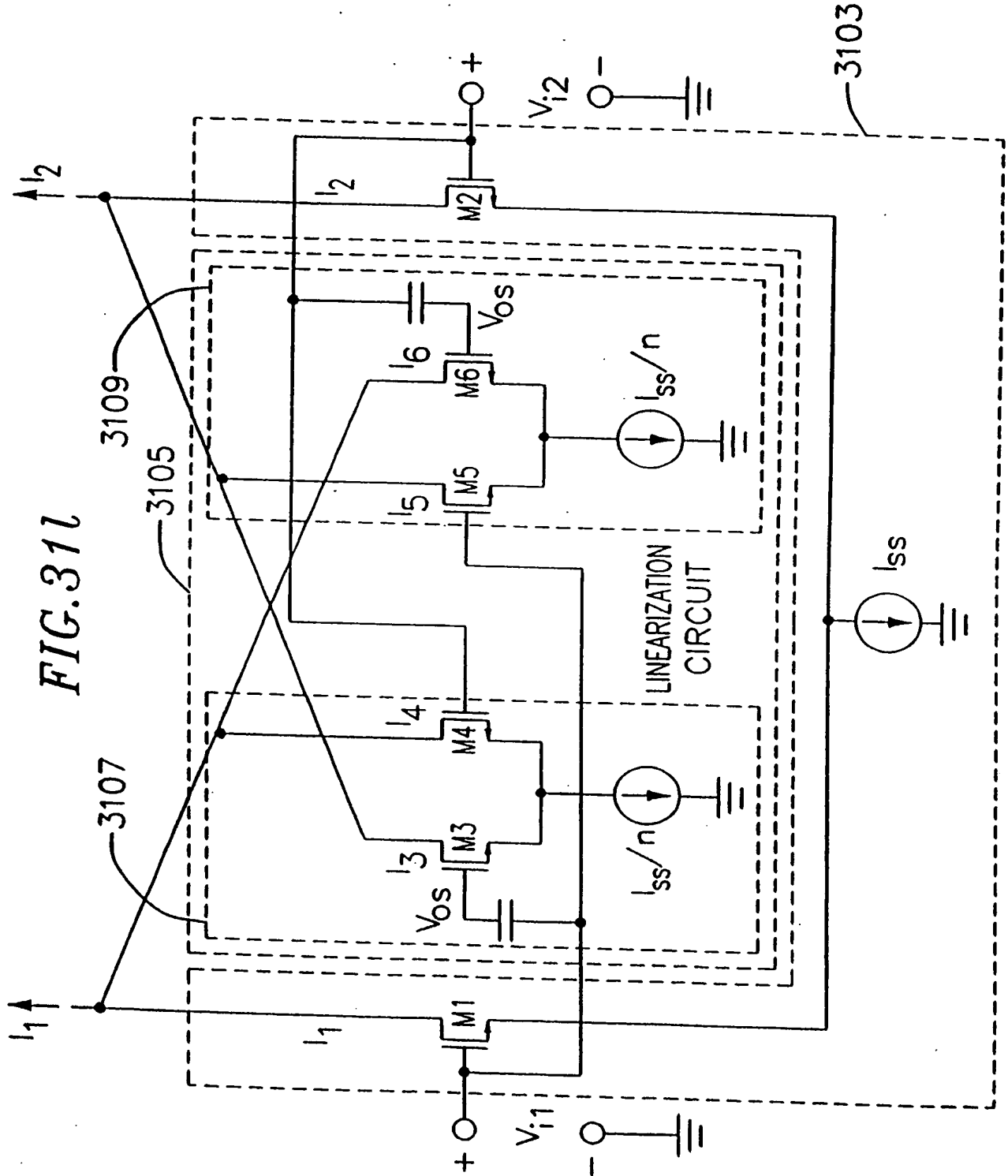
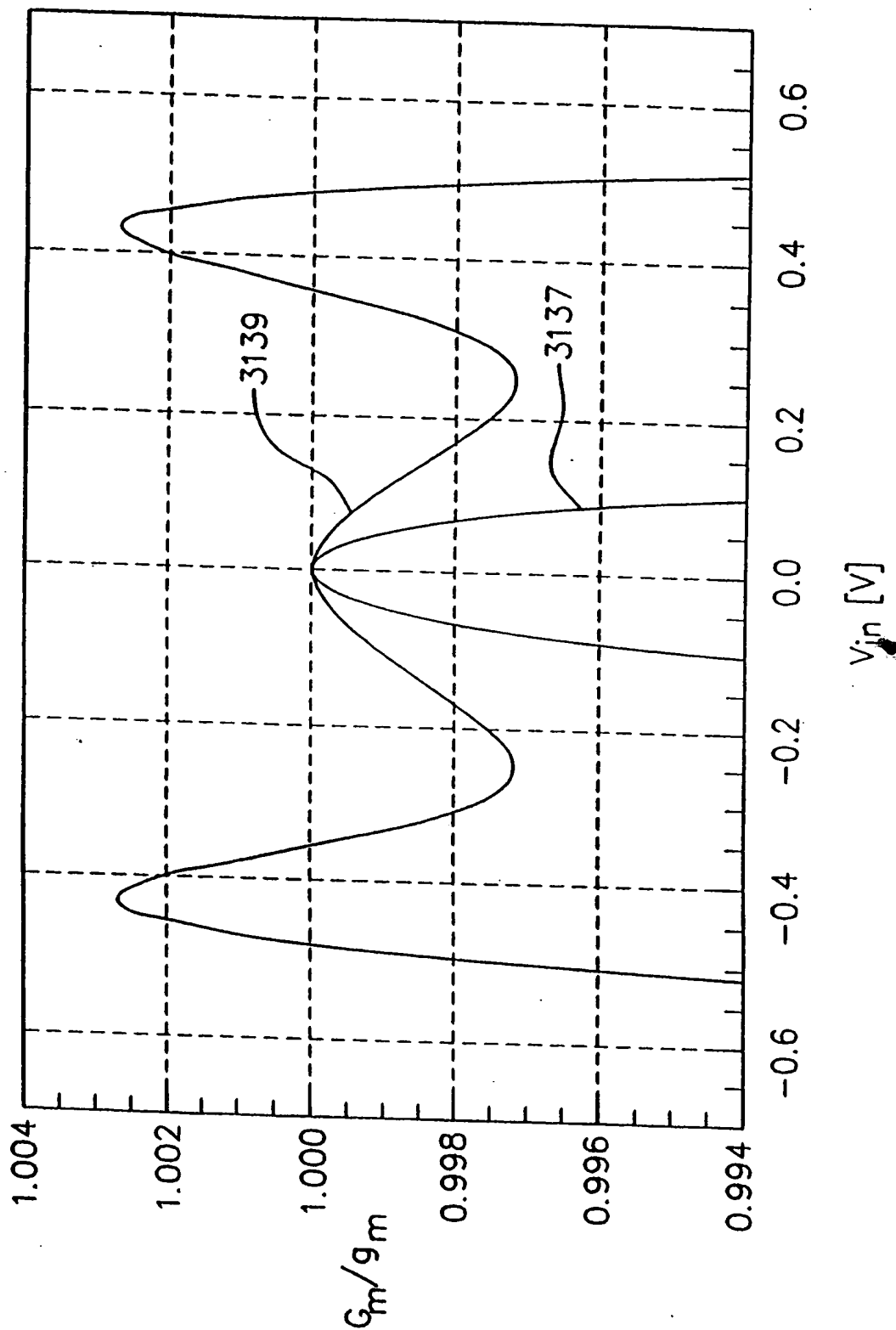


FIG. 31m



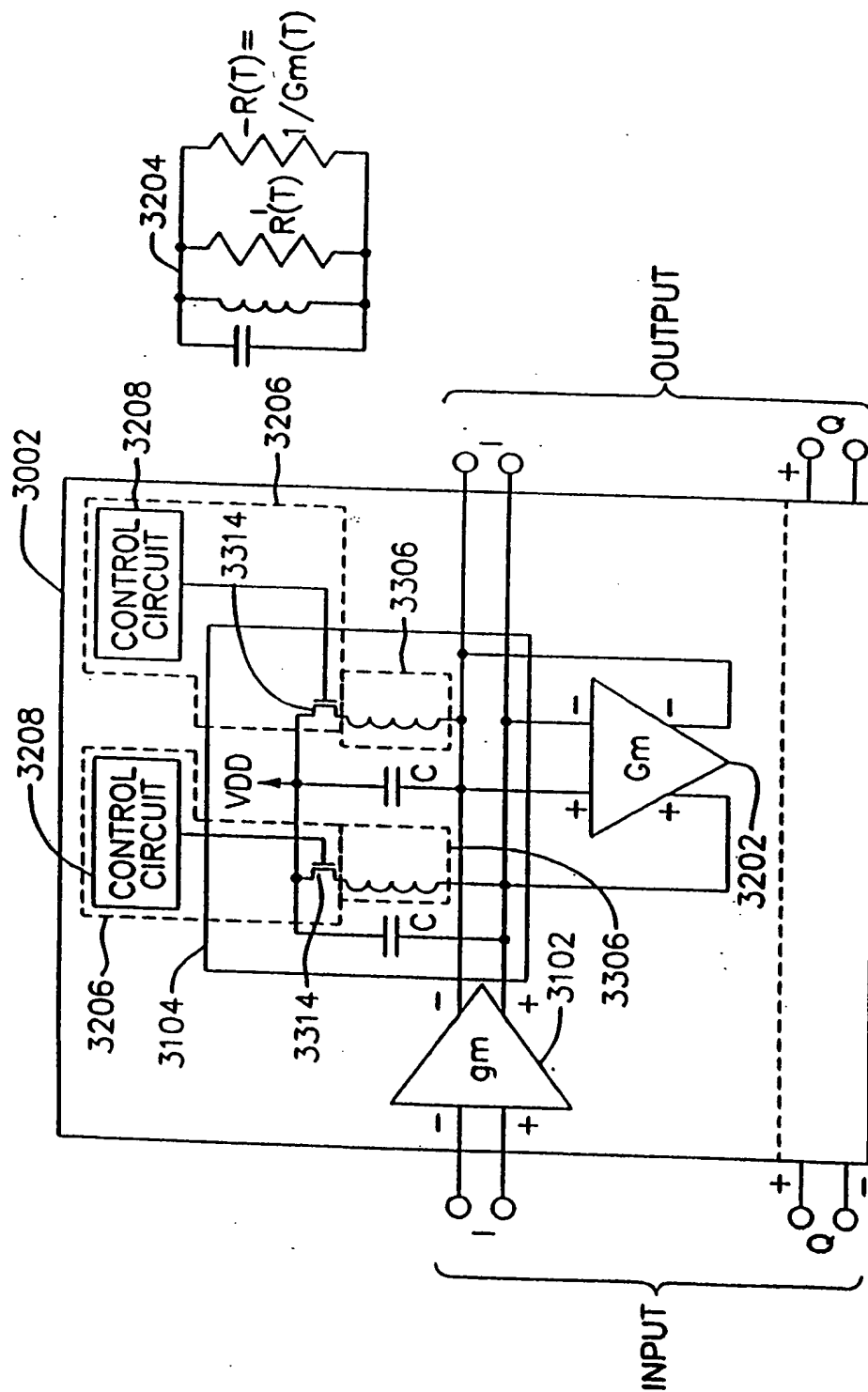


FIG. 33

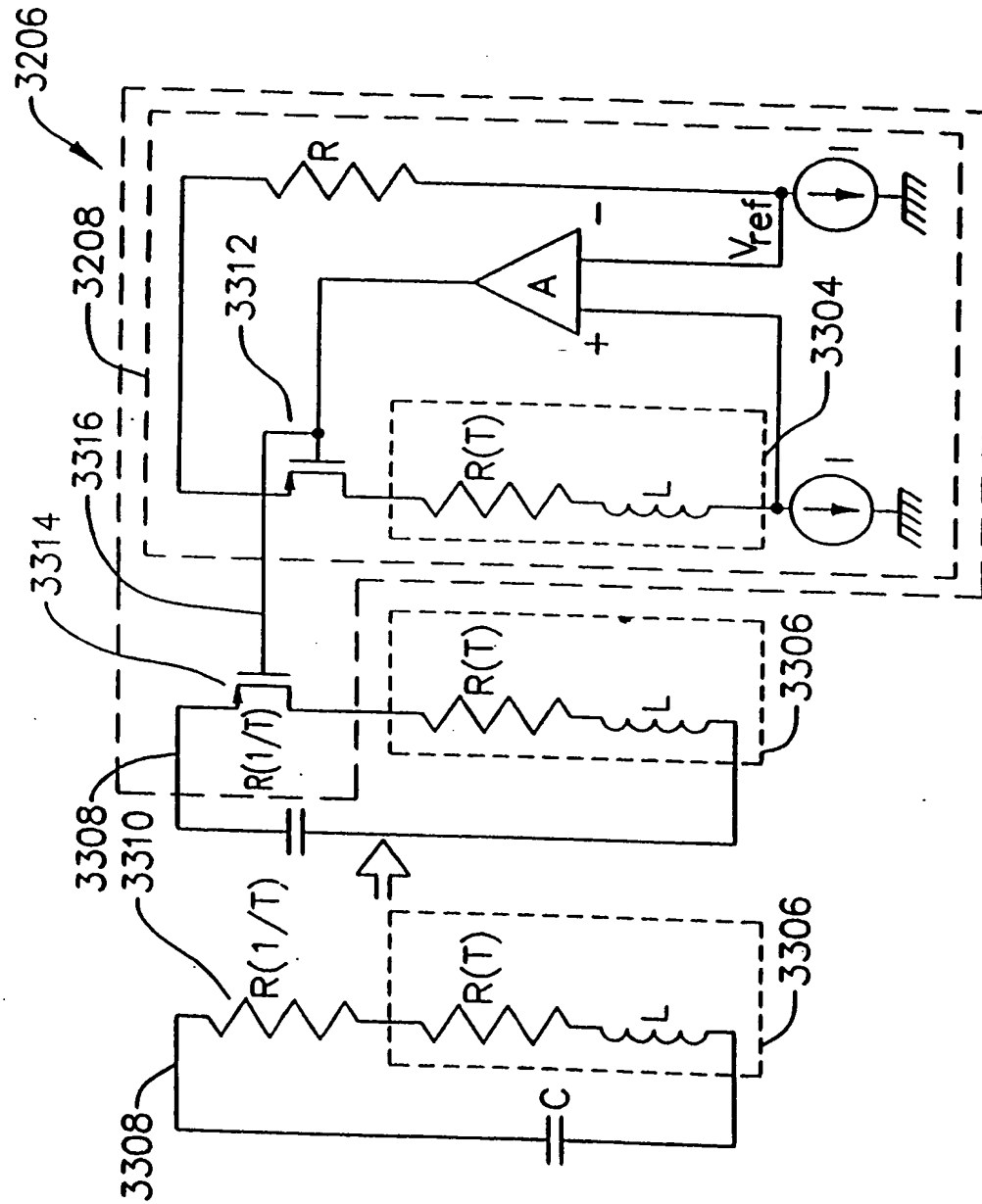
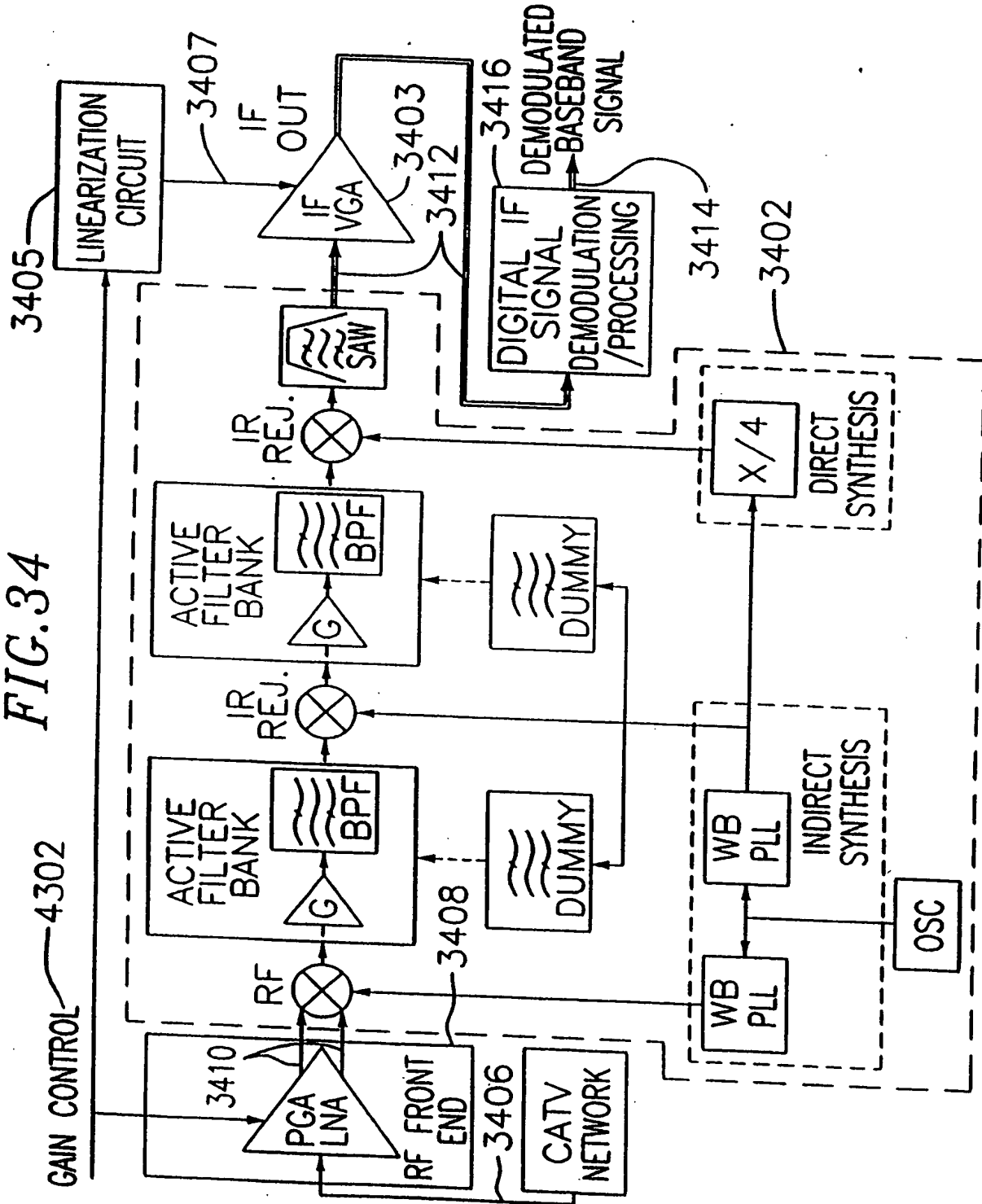


FIG. 34



**FIG.35**

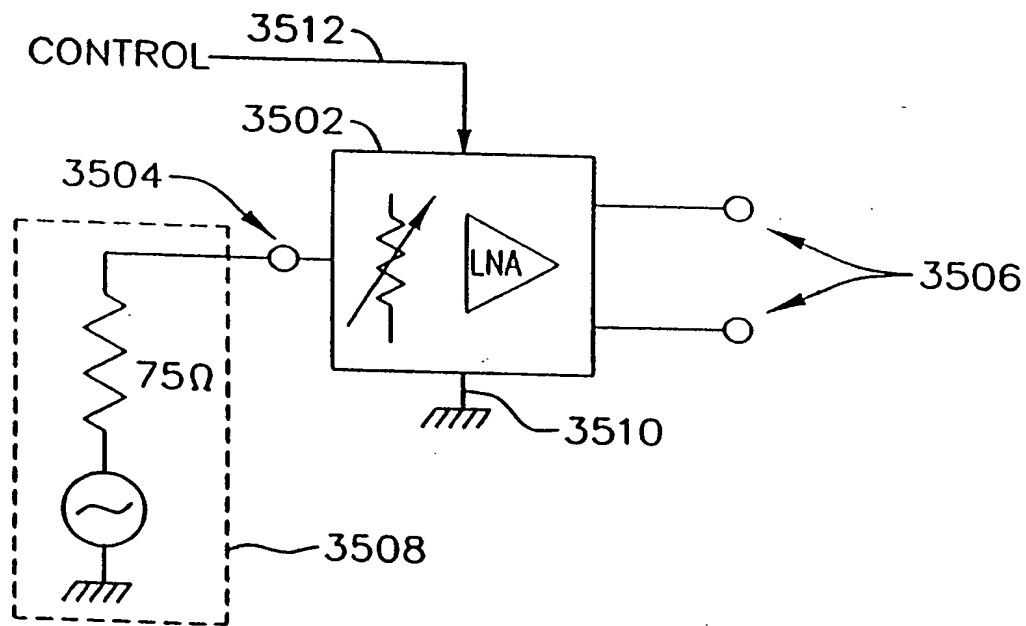


FIG. 36

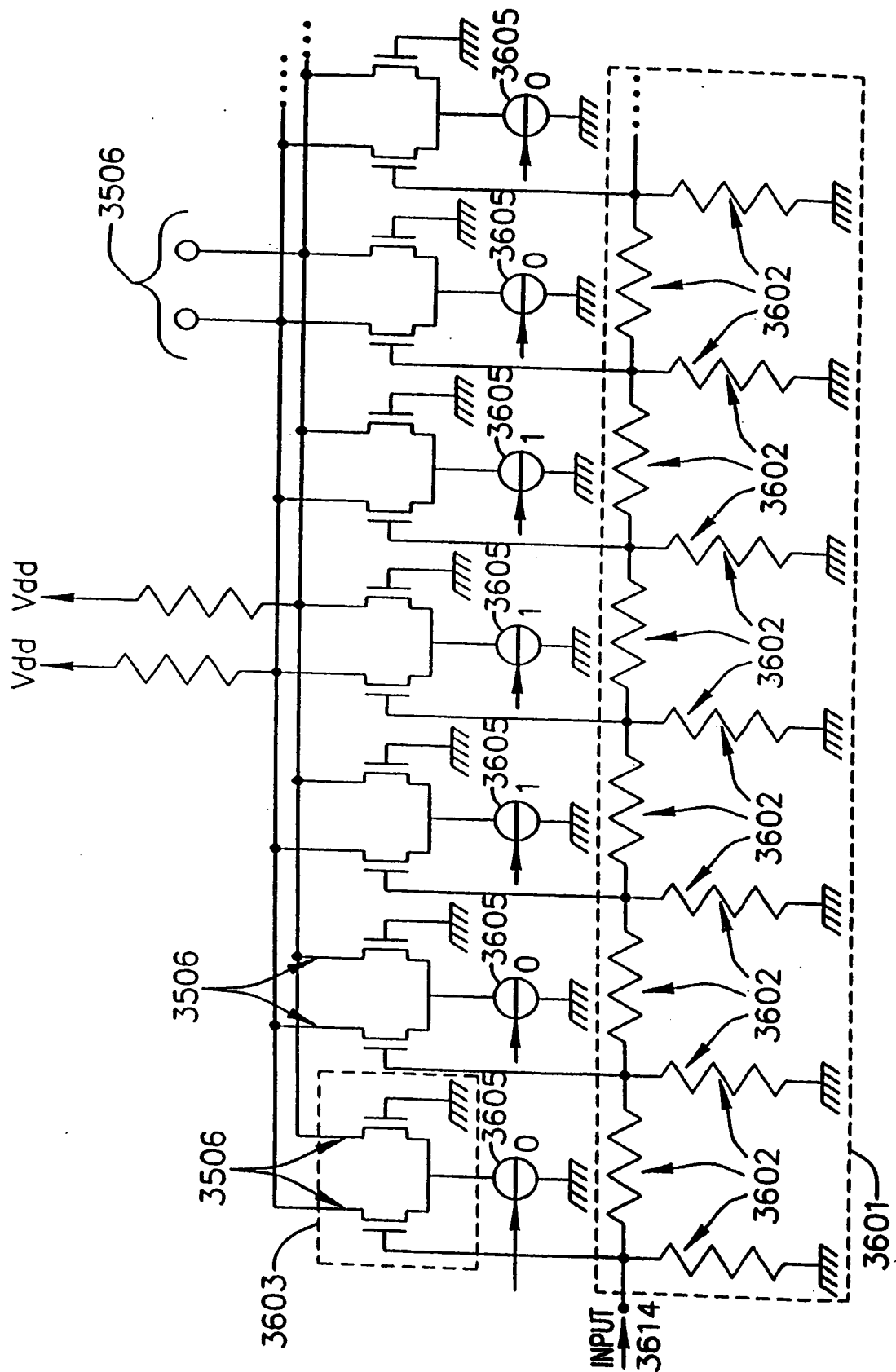




FIG. 37

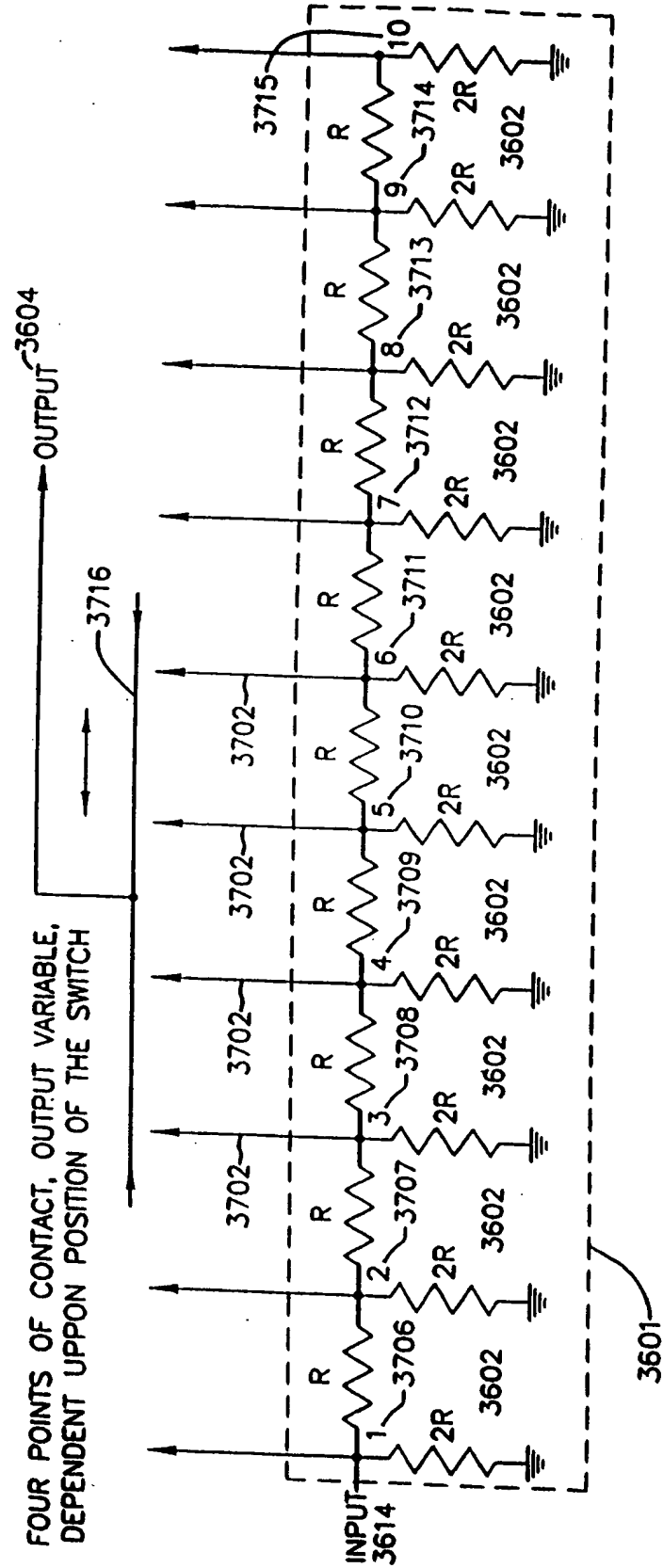


FIG. 38

PGA SETTINGS

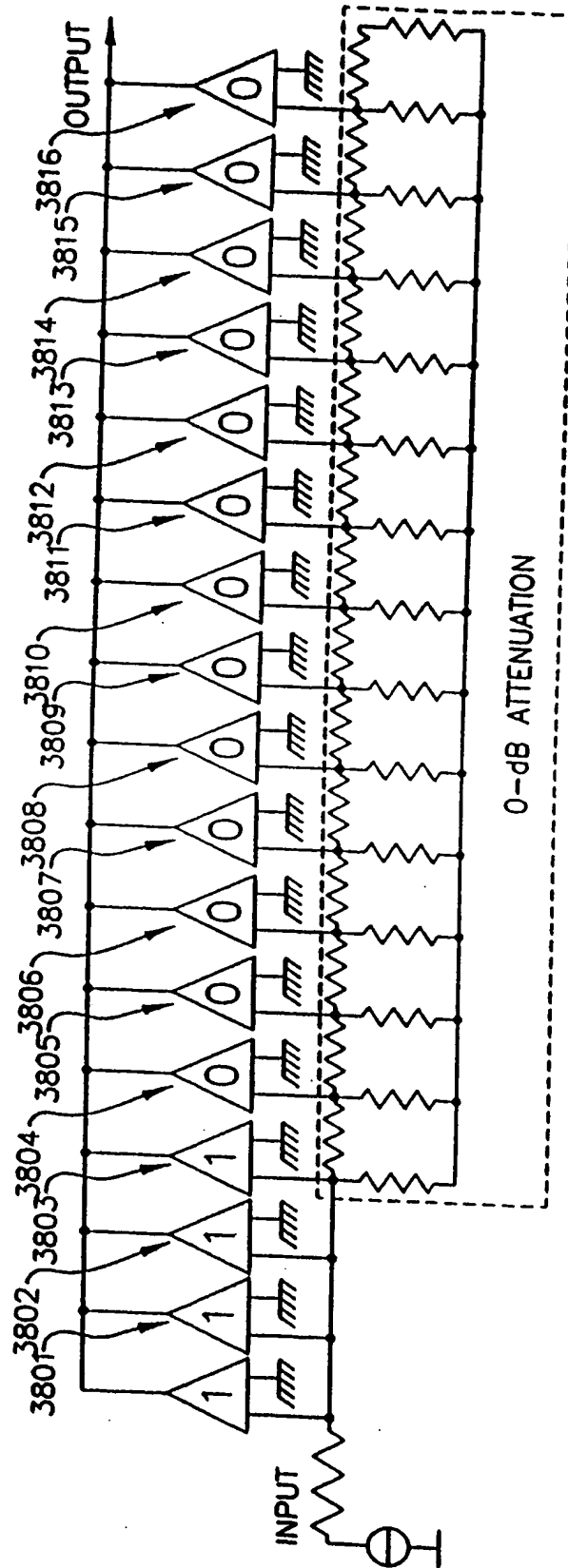


FIG. 39

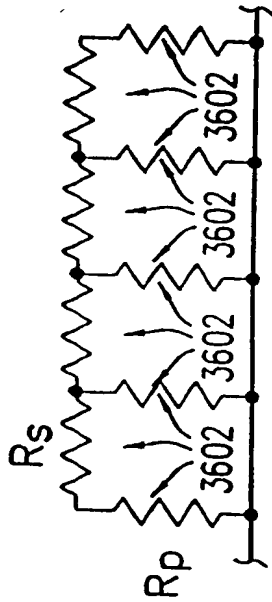


FIG. 40

PGA ARCHITECTURE

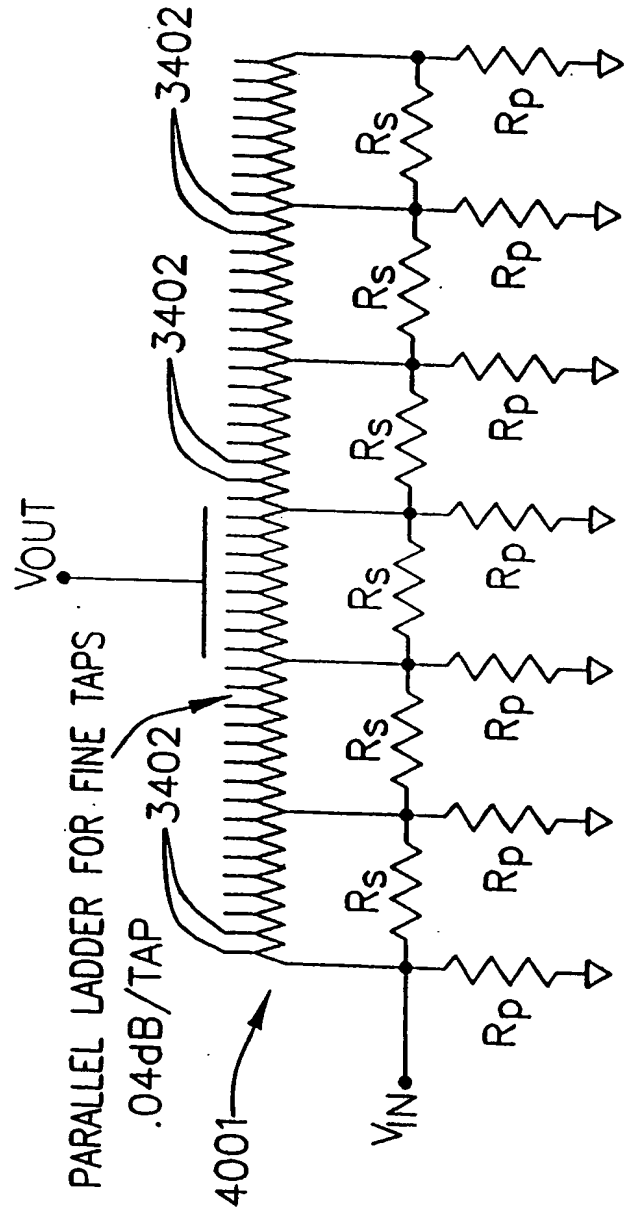


FIG. 41

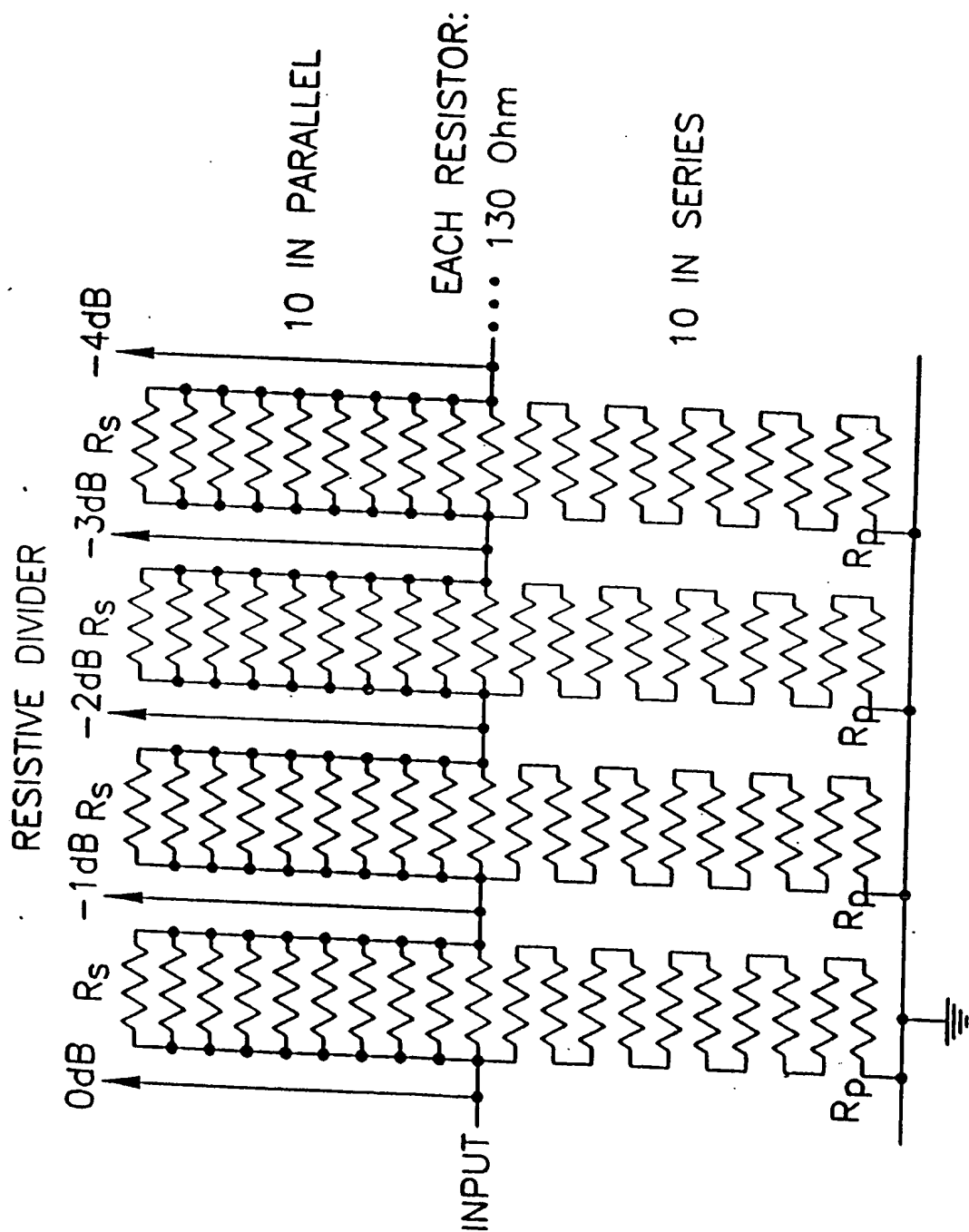
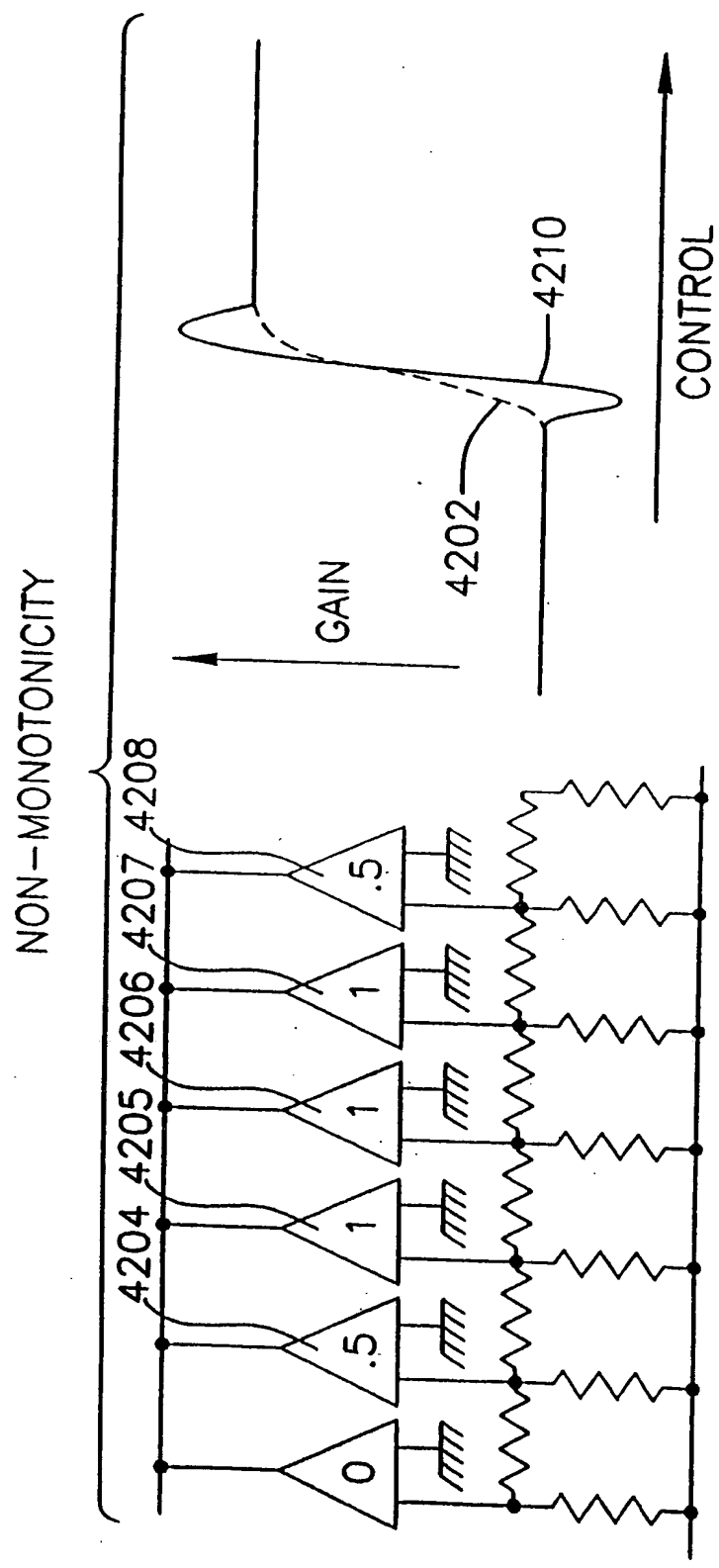
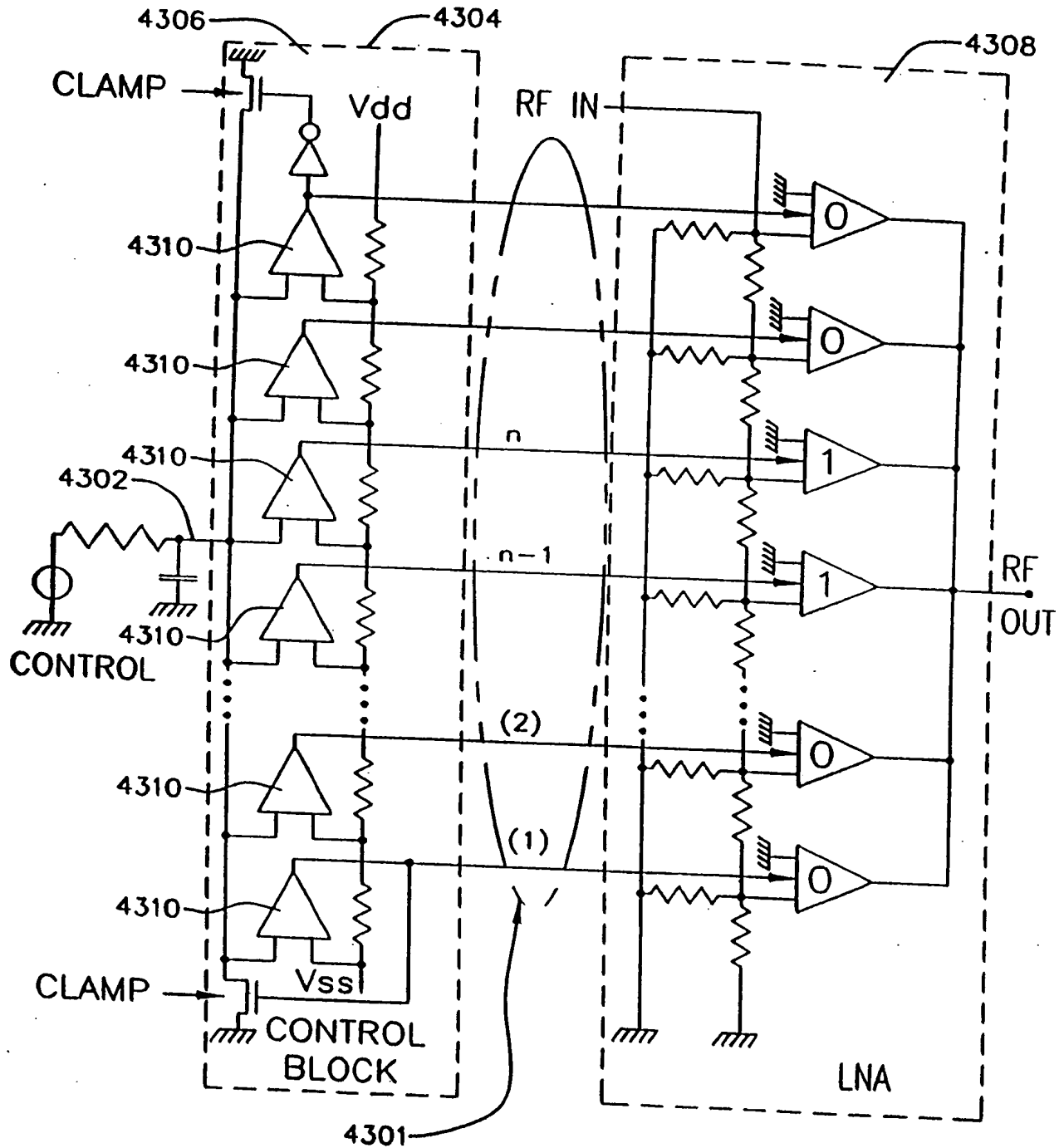


FIG. 42



**FIG. 43**  
 CLAMPING CONTROL RANGE



**FIG. 44a**  
 CONTROLLED GAIN COMPARATOR

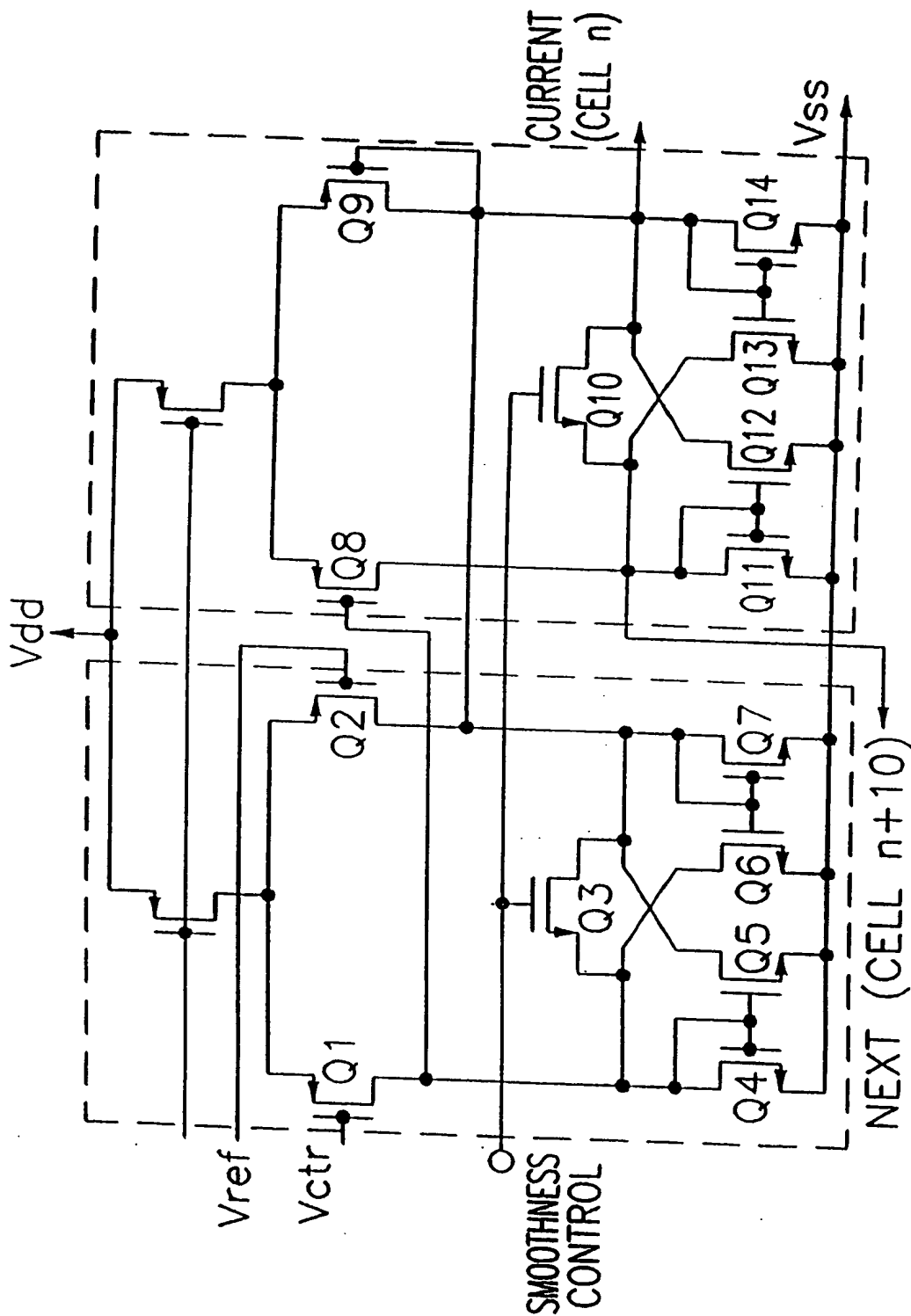


FIG. 44b

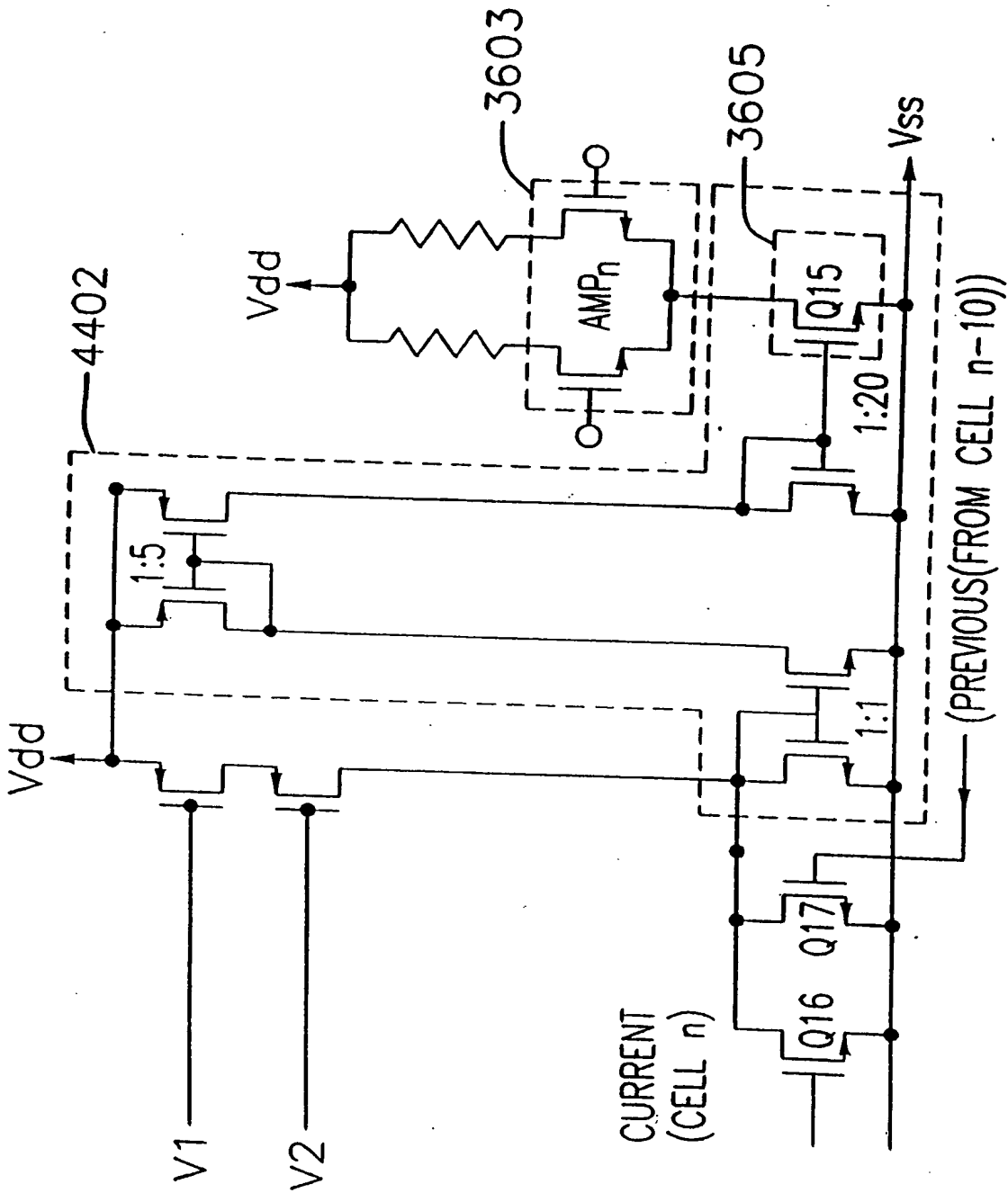




FIG. 45a

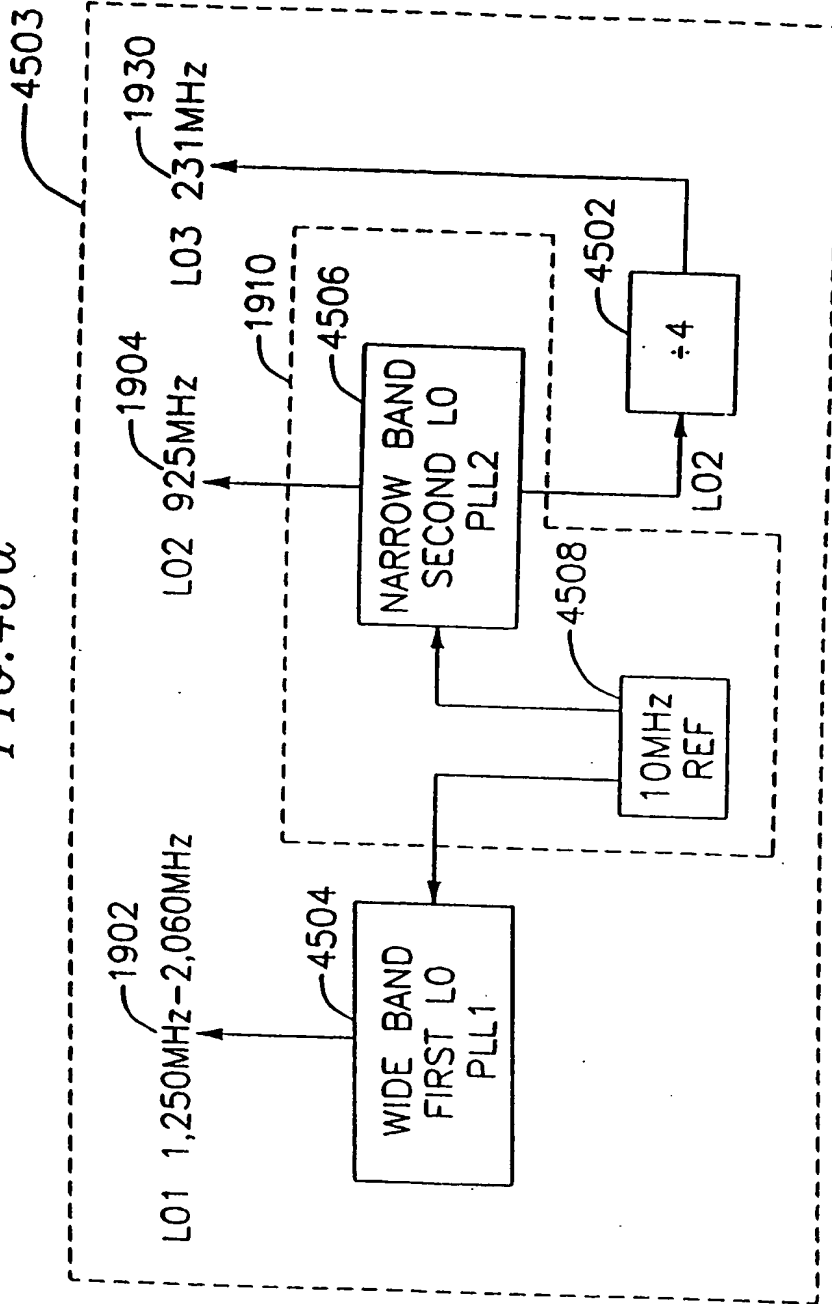


FIG. 45b

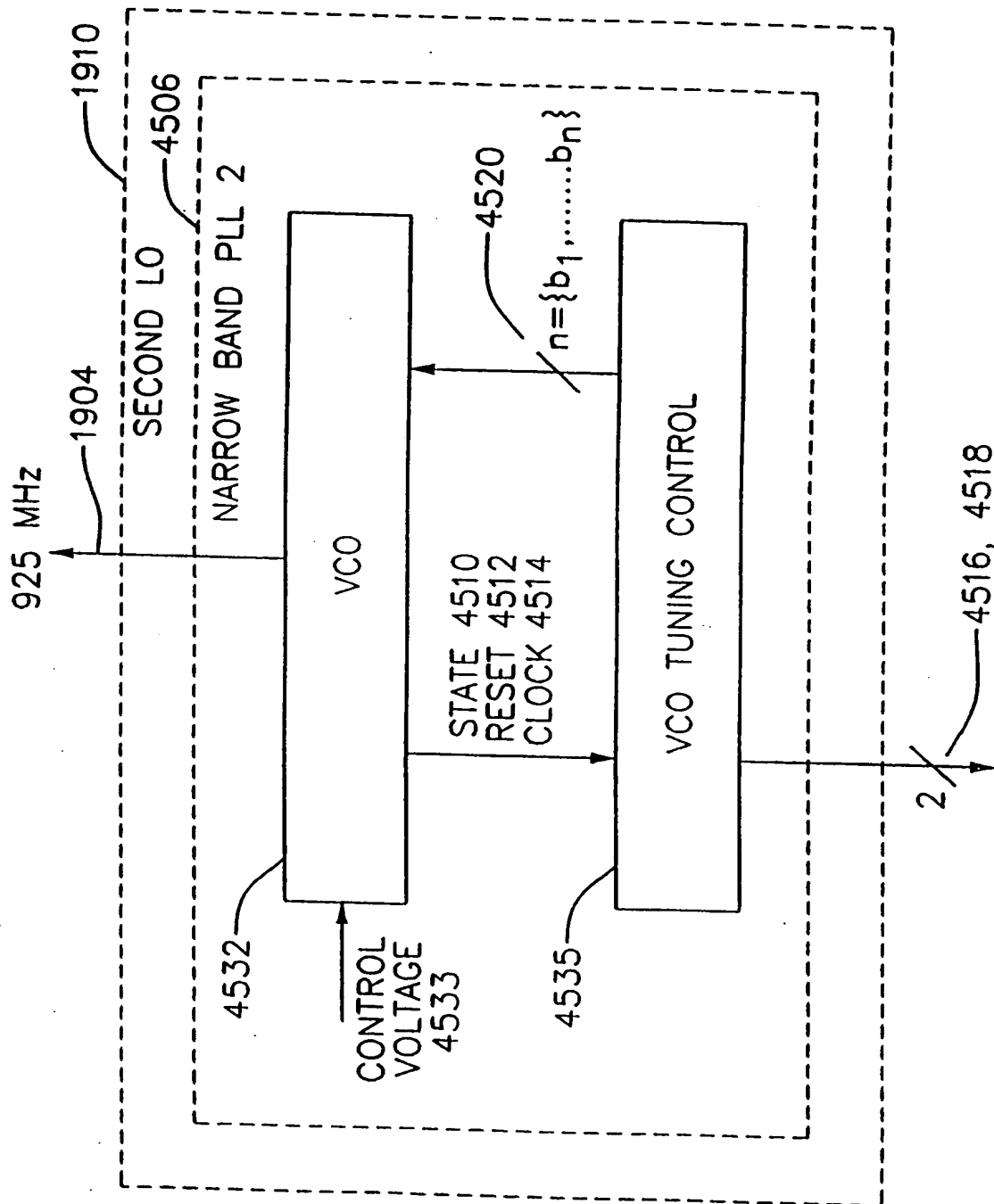


FIG. 450c

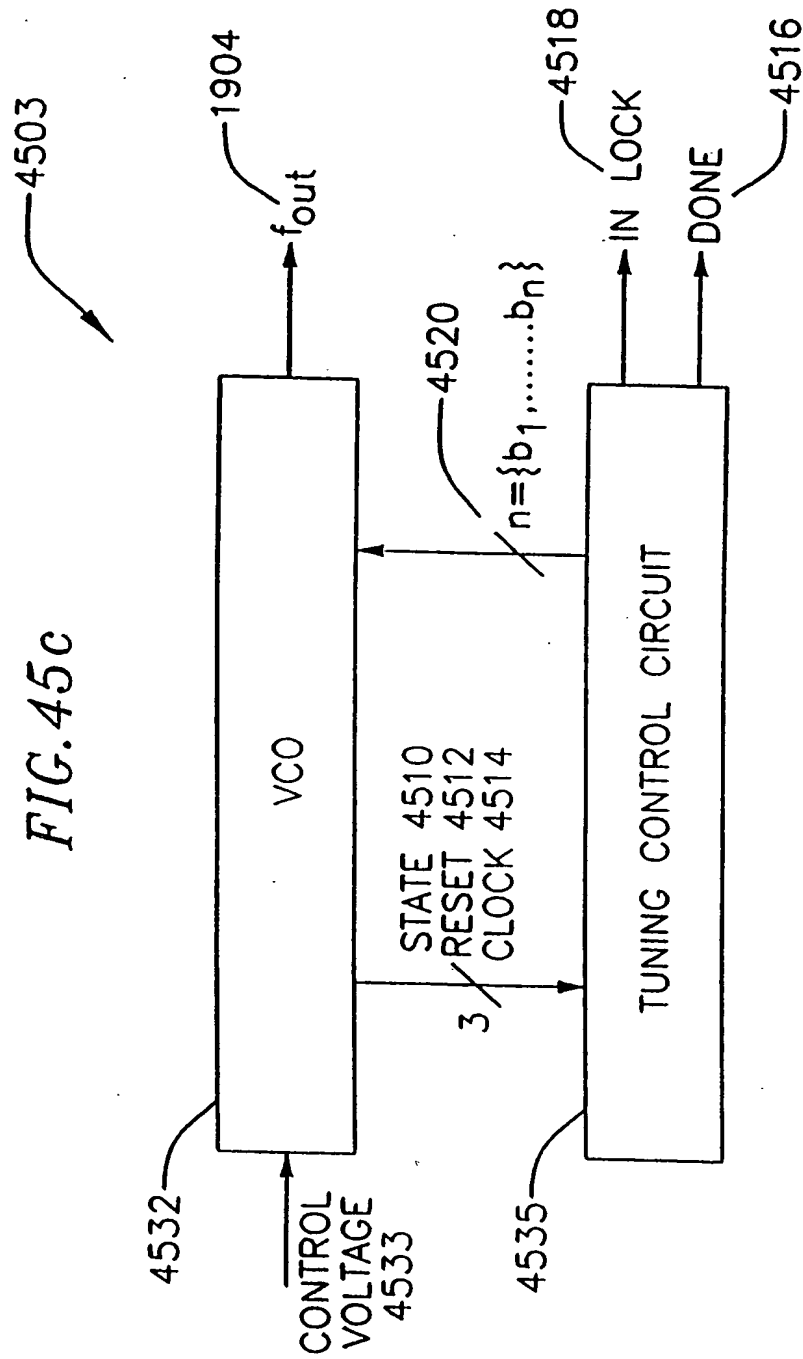
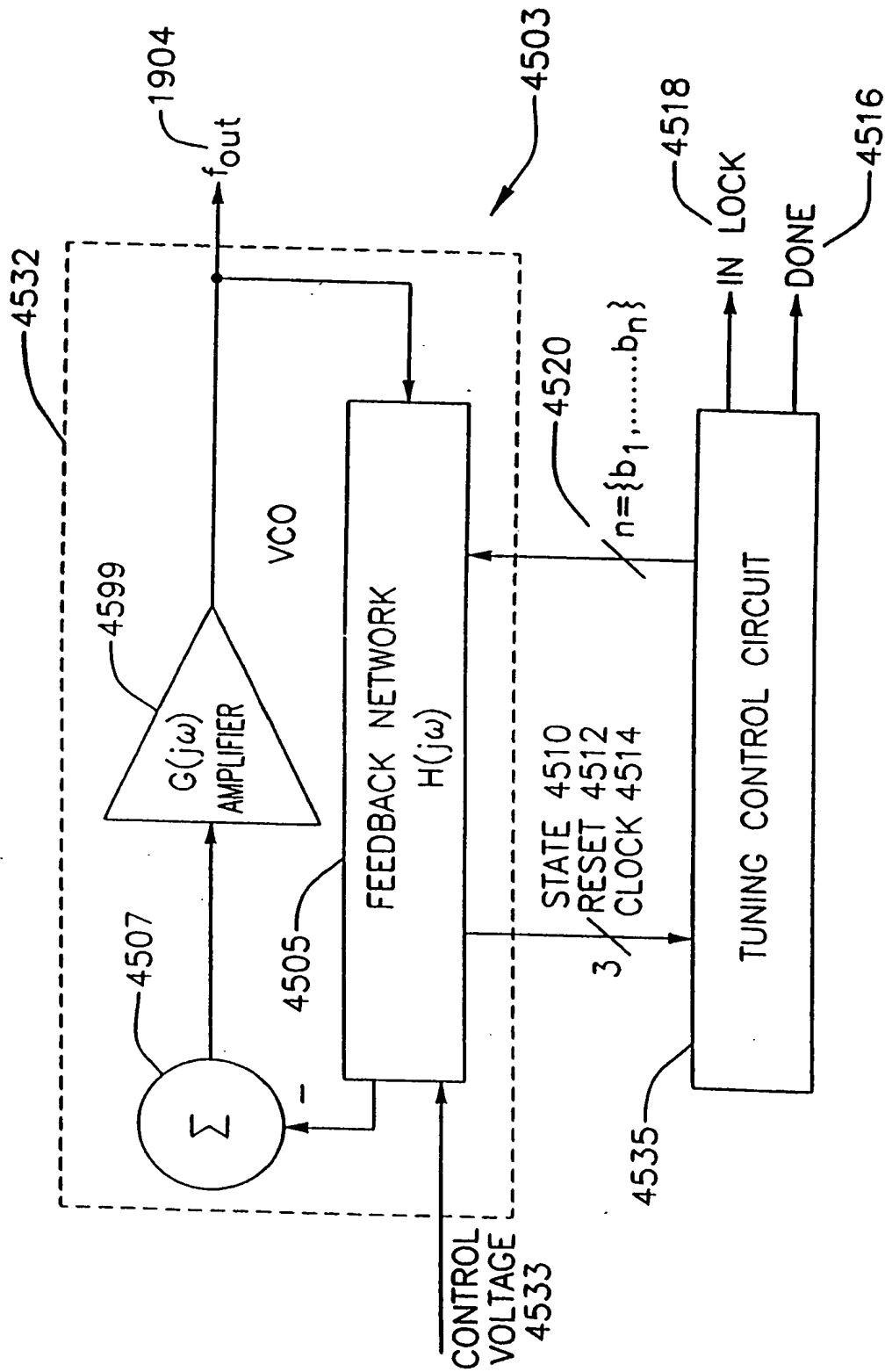
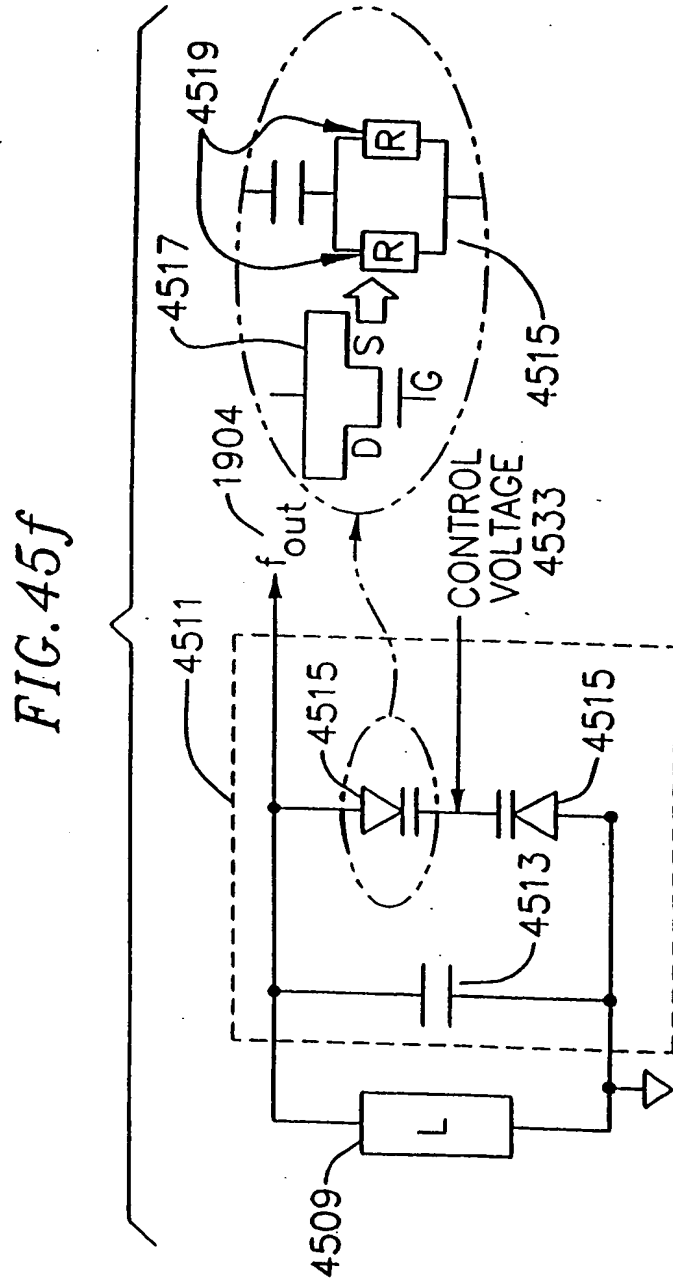
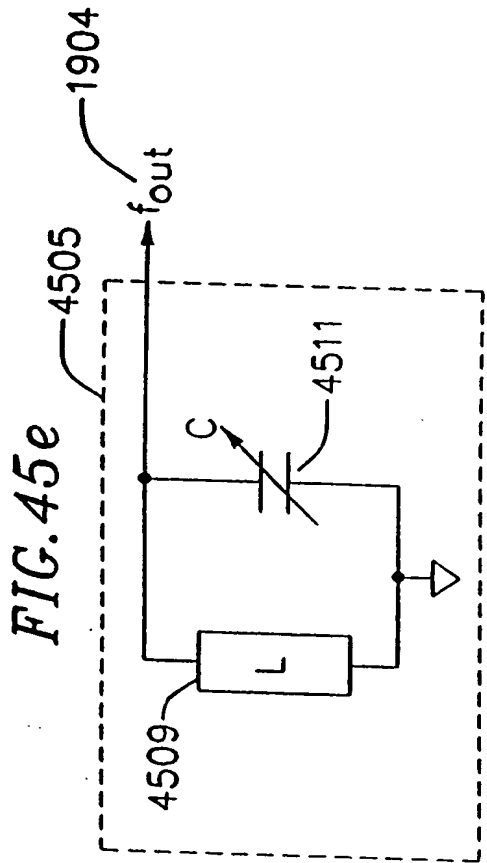


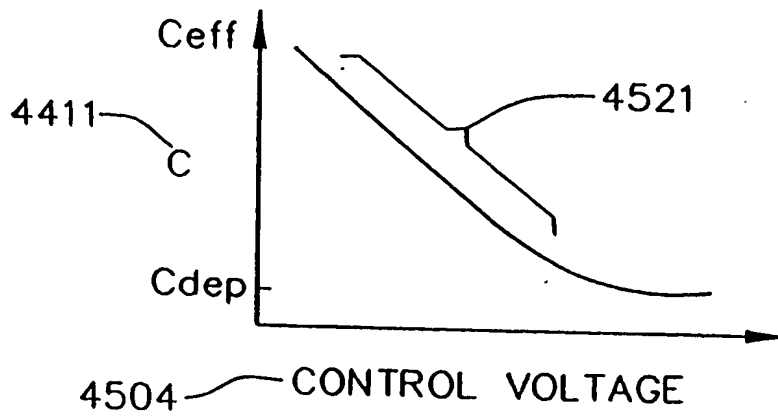
FIG. 45d



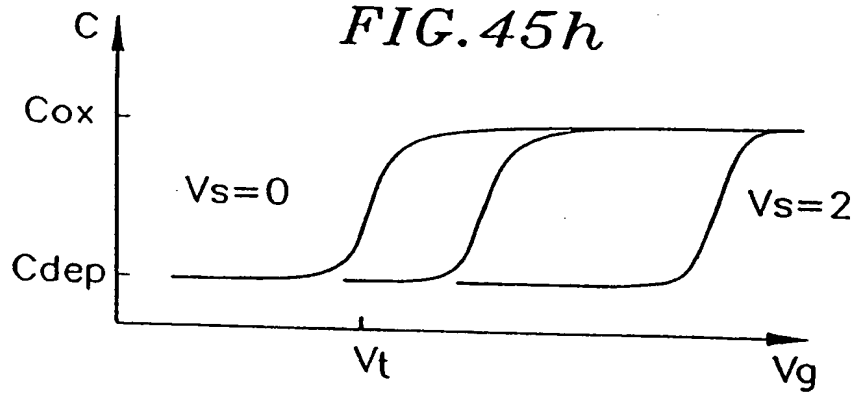


**FIG. 45g**

CAPACITANCE VS CONTROL VOLTAGE



**FIG. 45h**



**FIG. 45j**

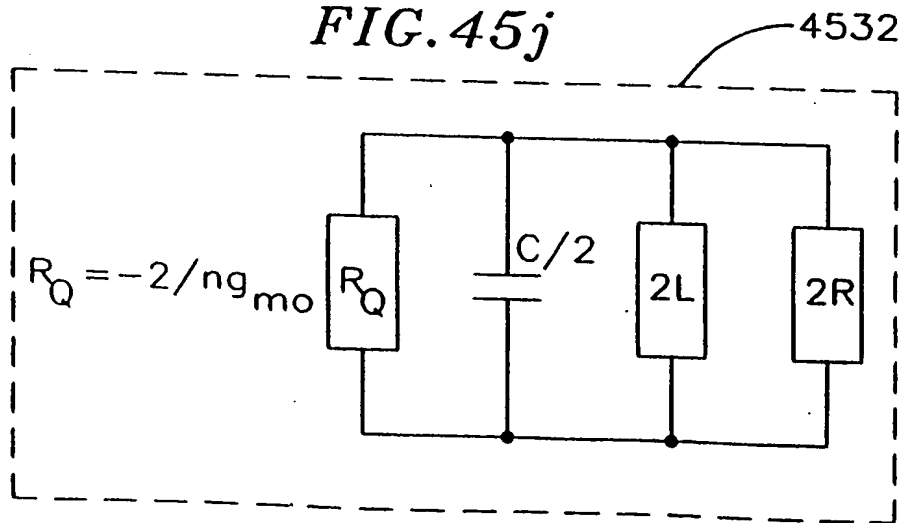


FIG. 45i

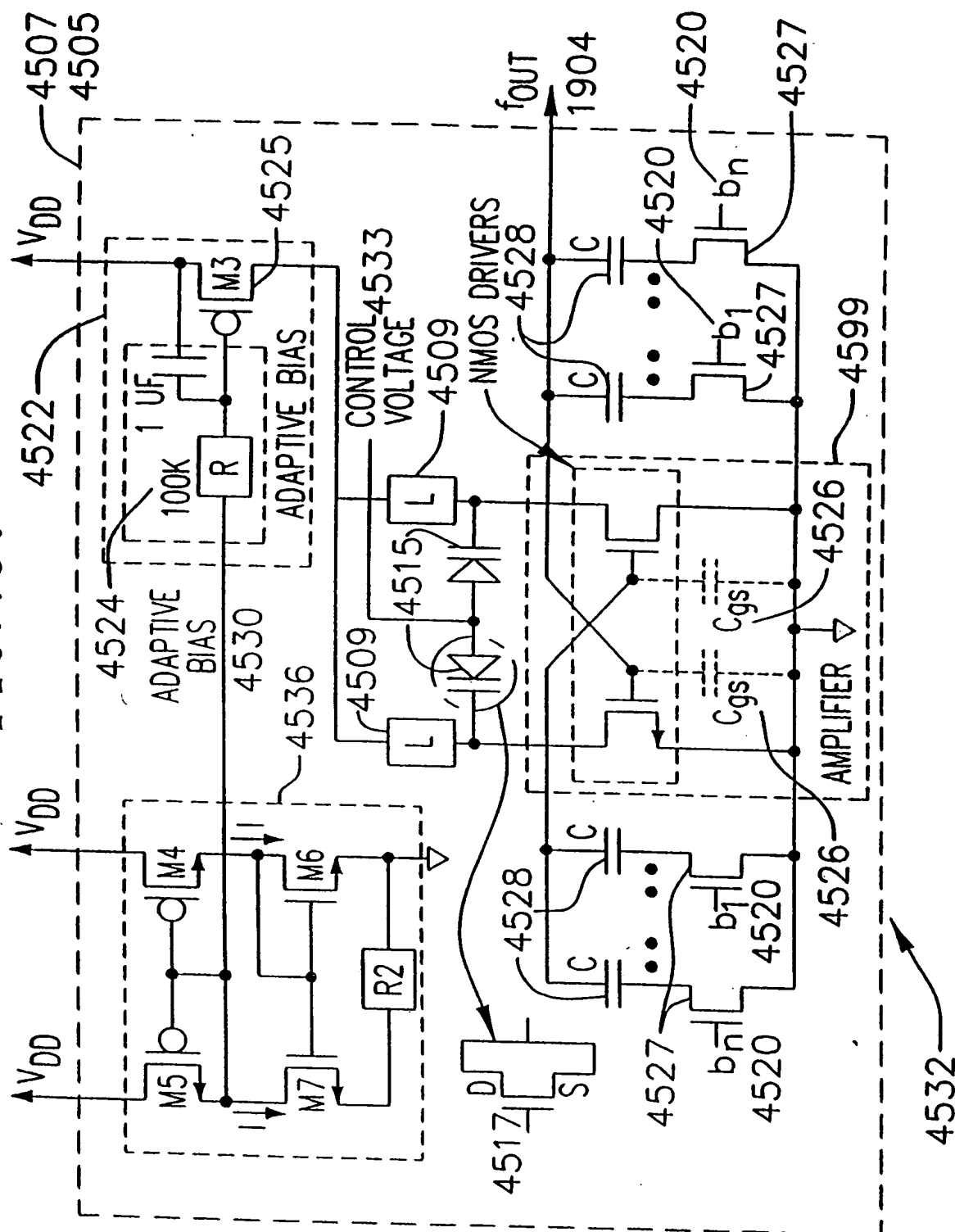


FIG. 45k

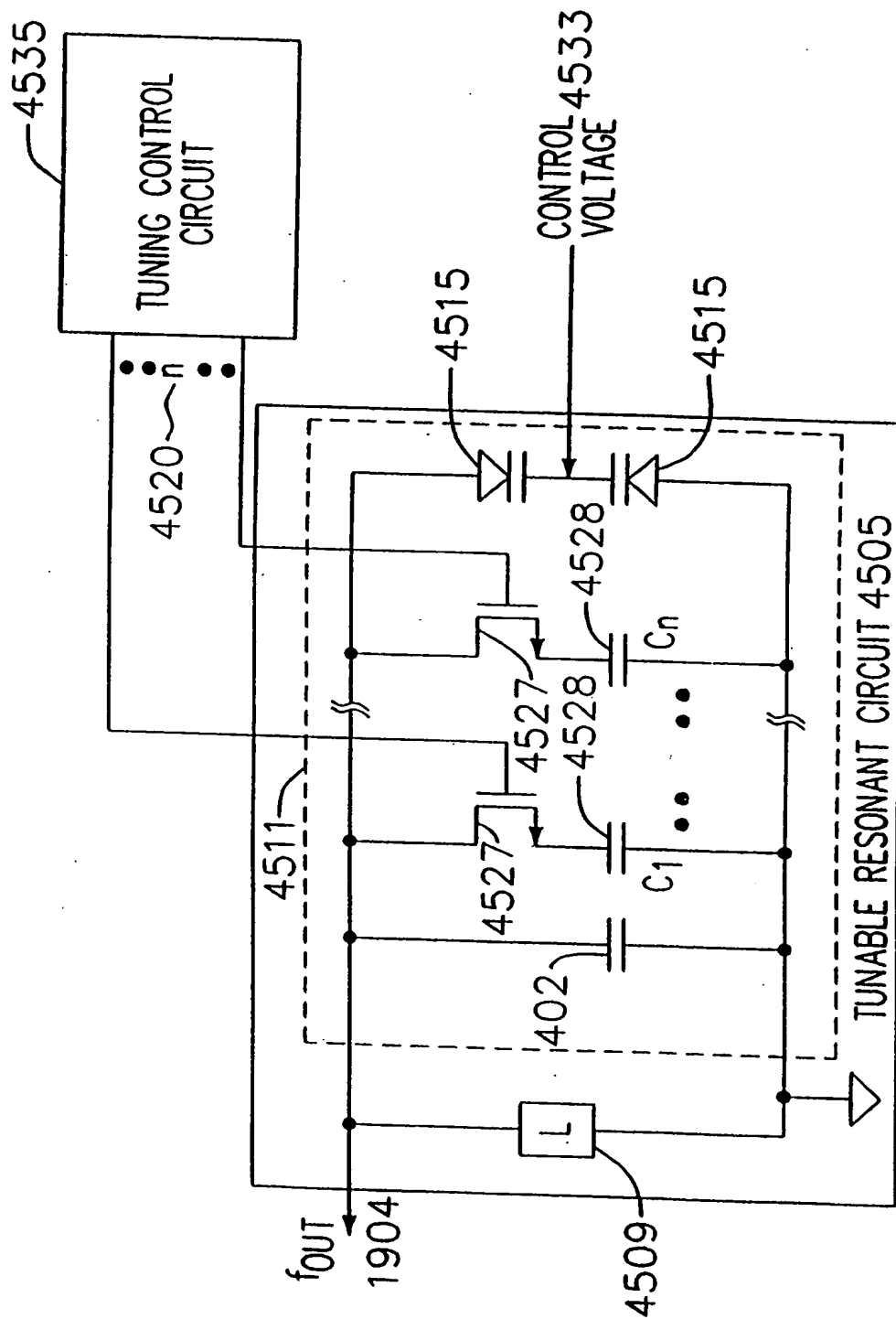




FIG. 46a

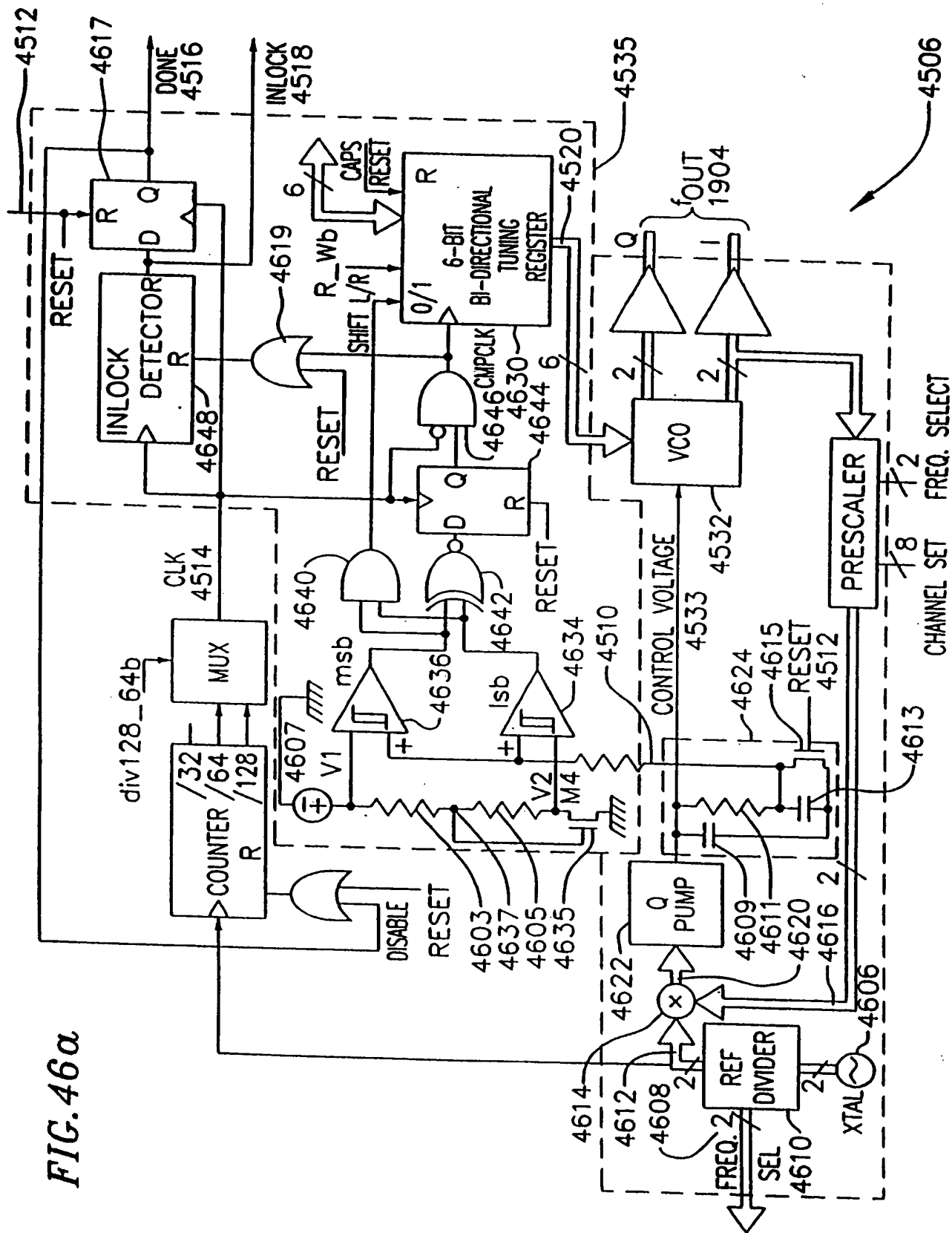


FIG. 466b

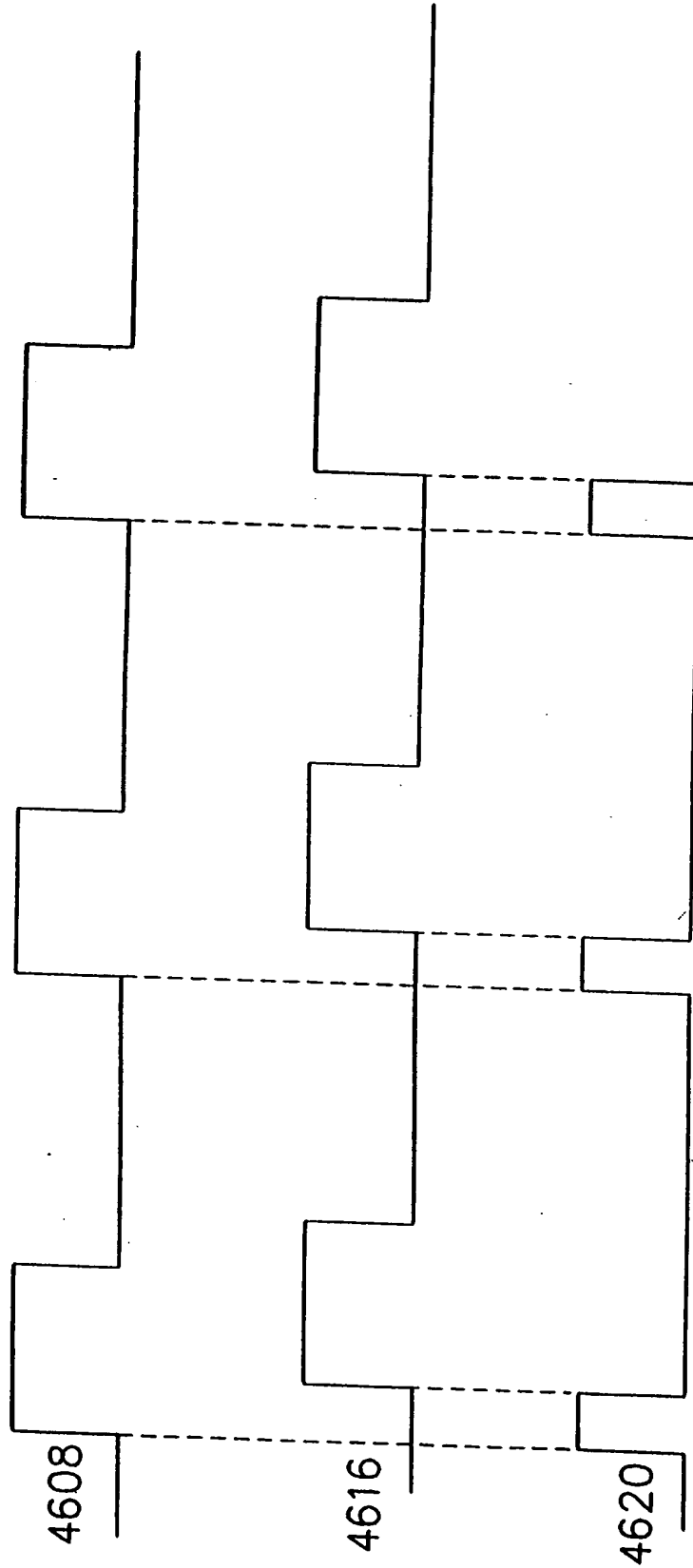


FIG. 47a

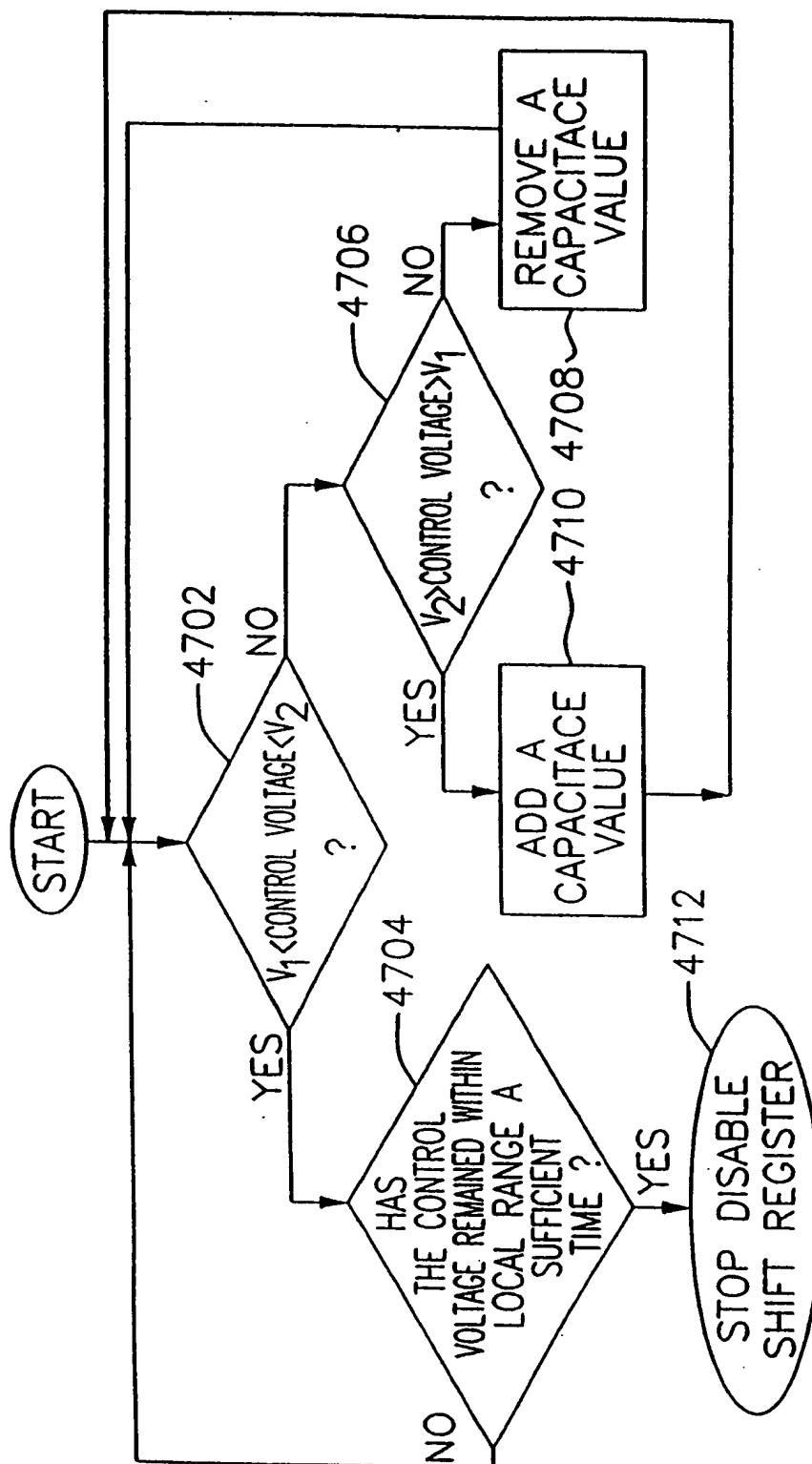


FIG. 47b

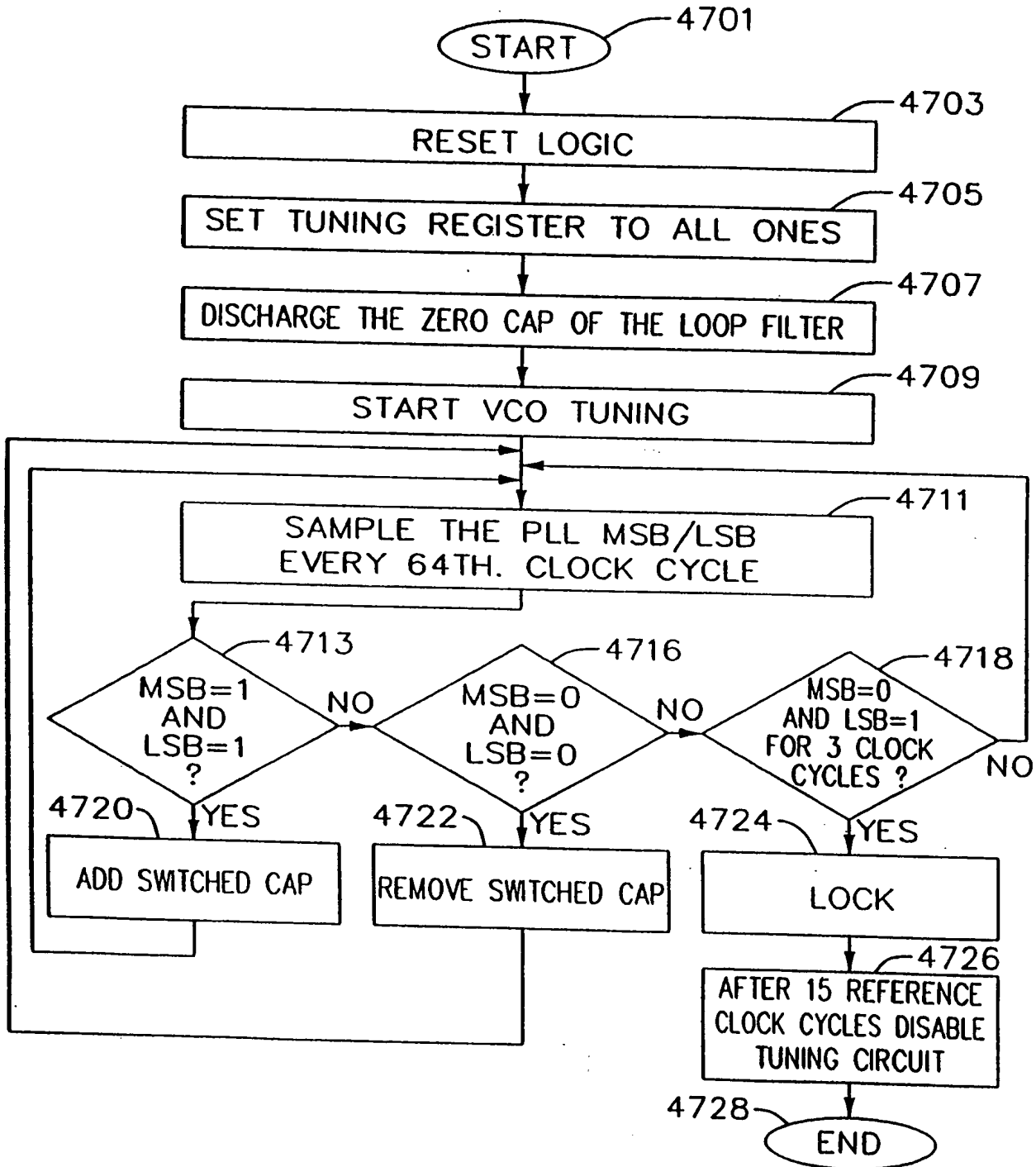


FIG. 47c

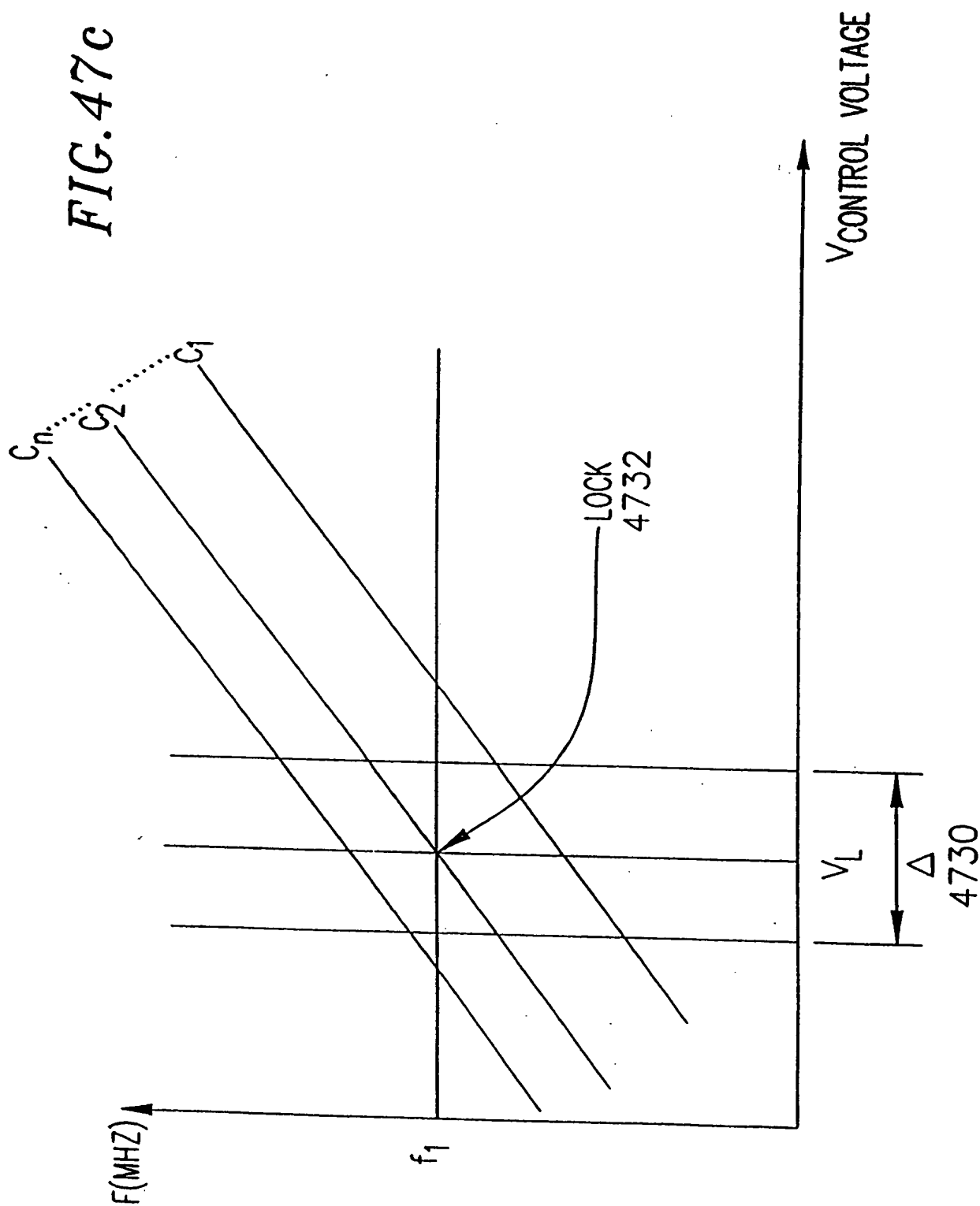


FIG. 47d

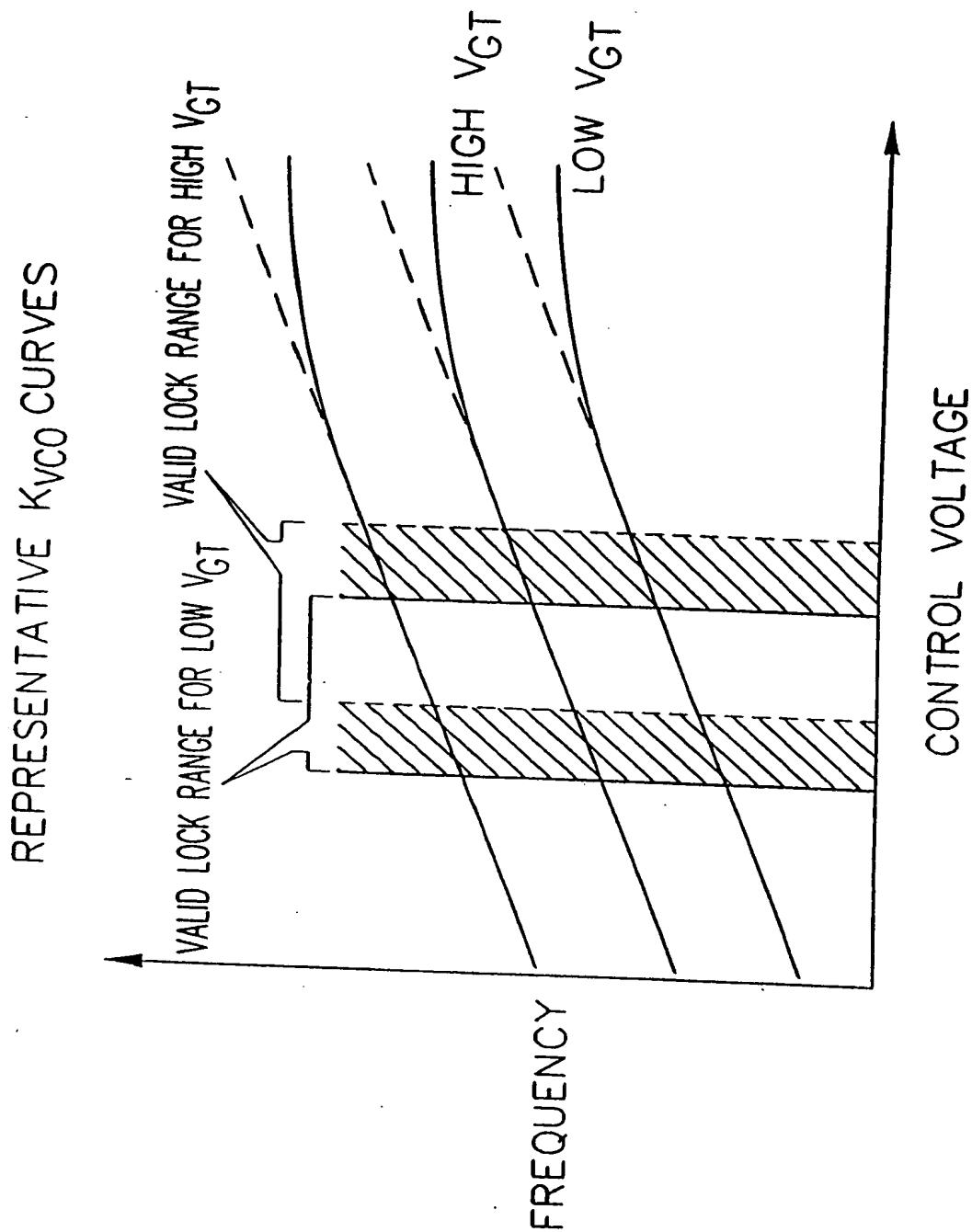


FIG. 48

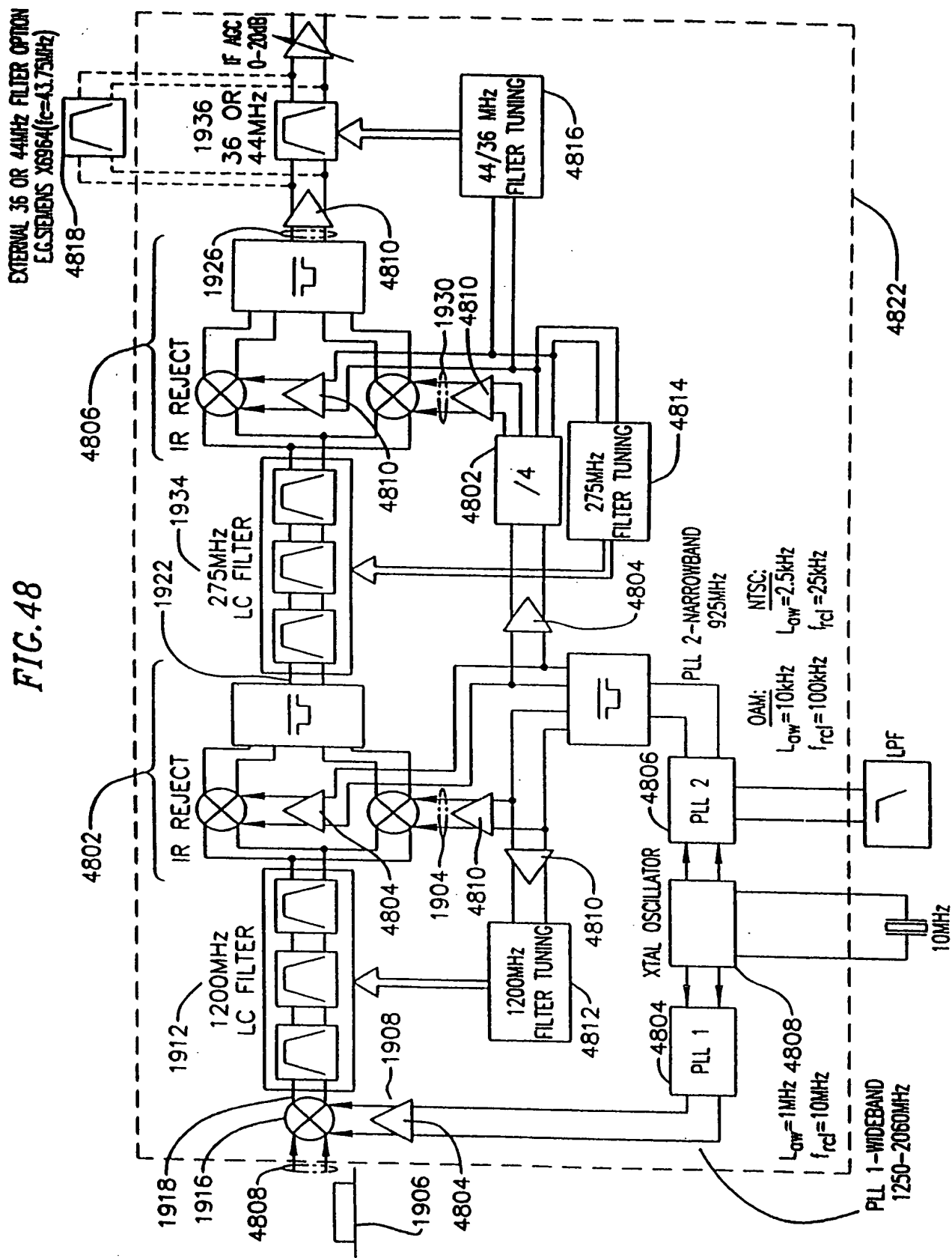


FIG. 49

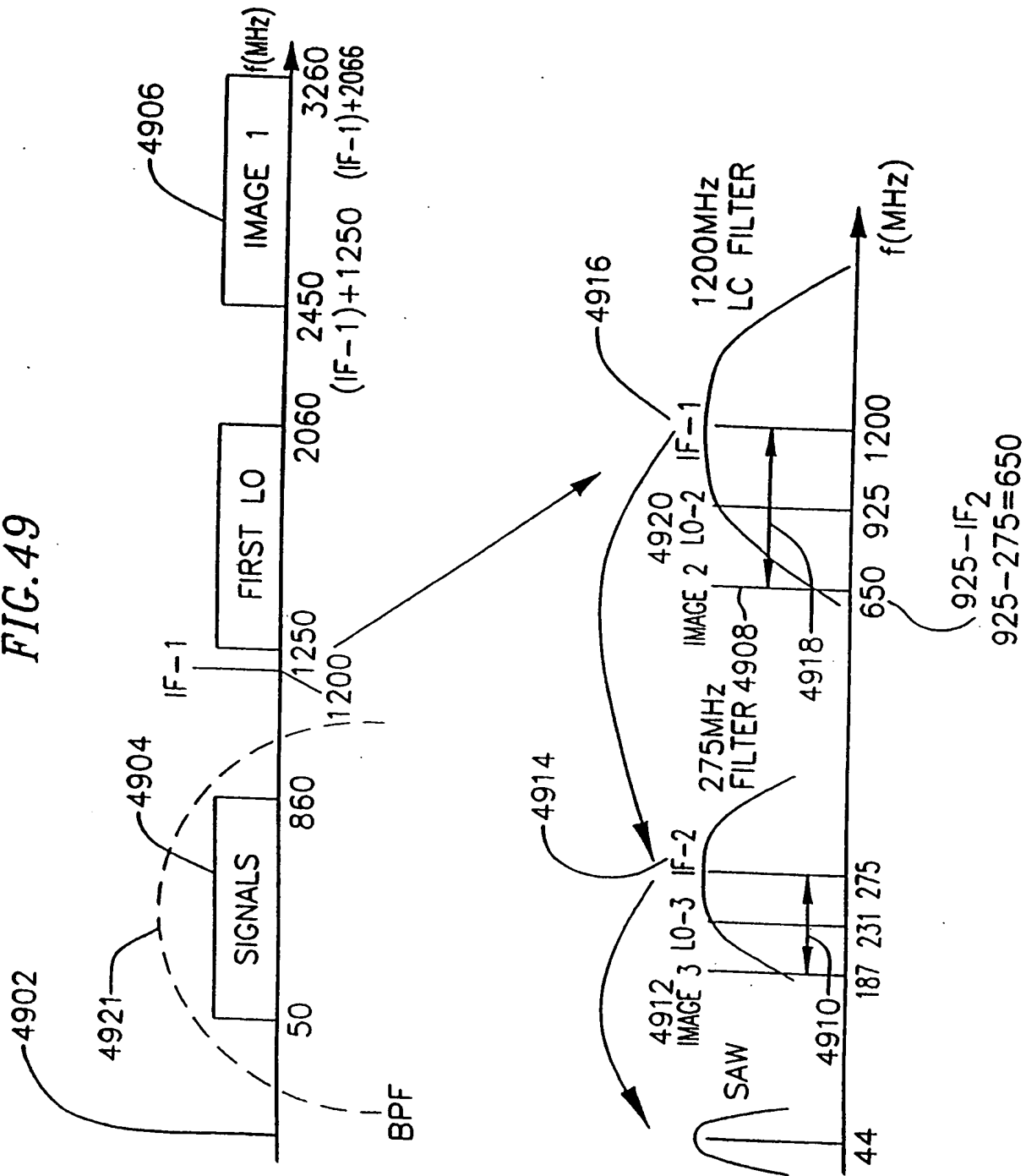




FIG. 50

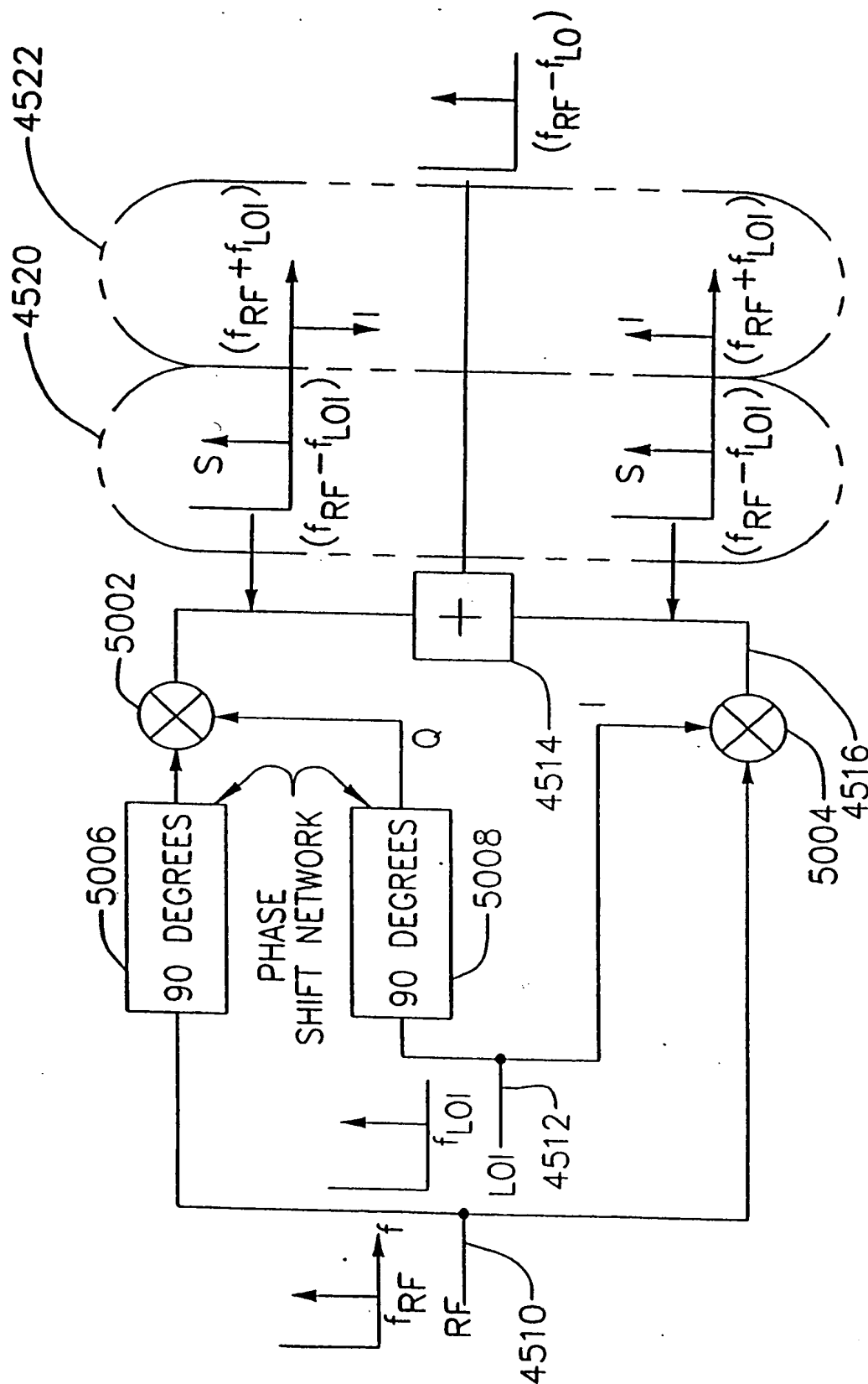
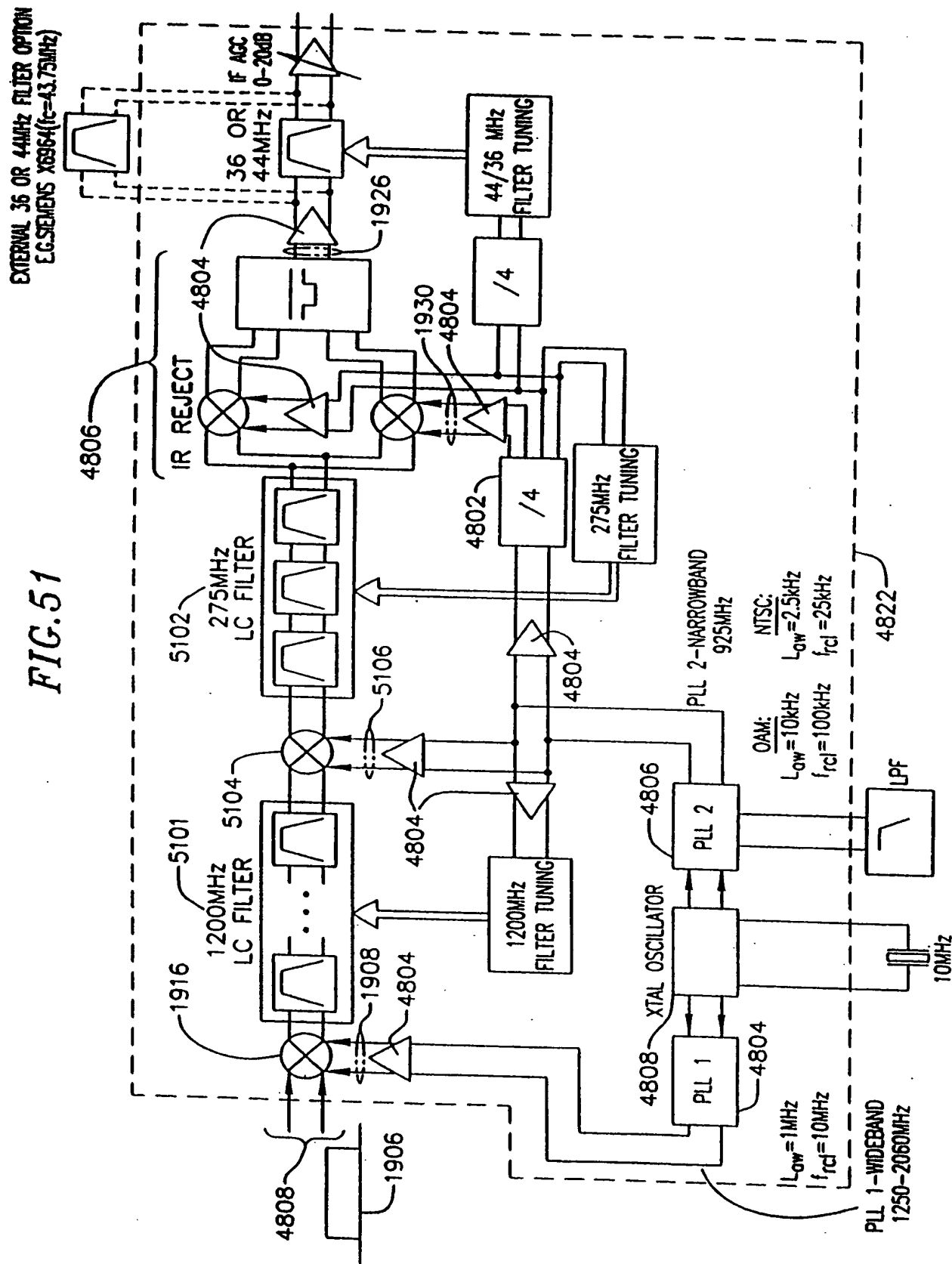
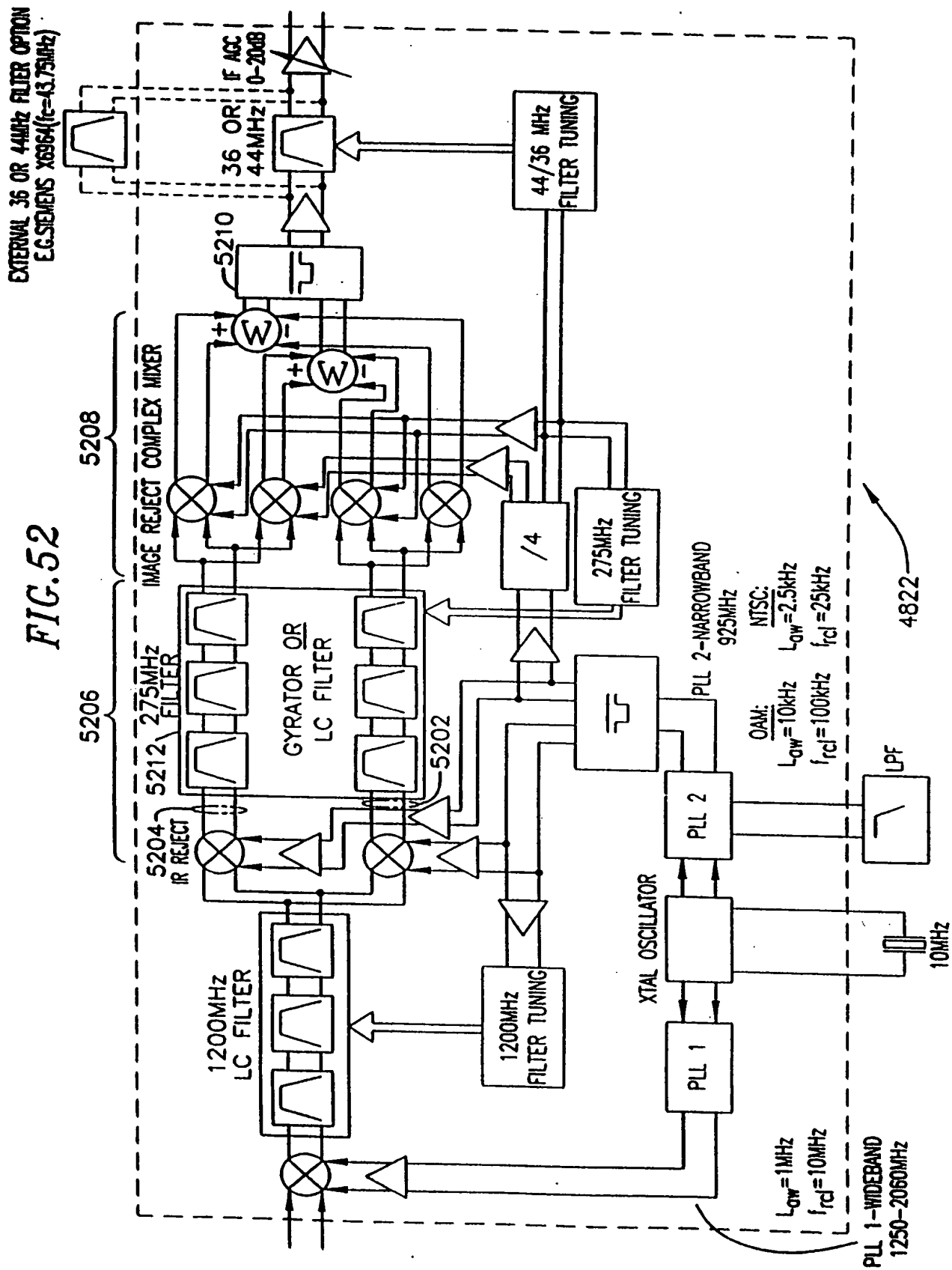


FIG. 51



**FIG. 52**



**FIG. 53**  
 CATV TUNER

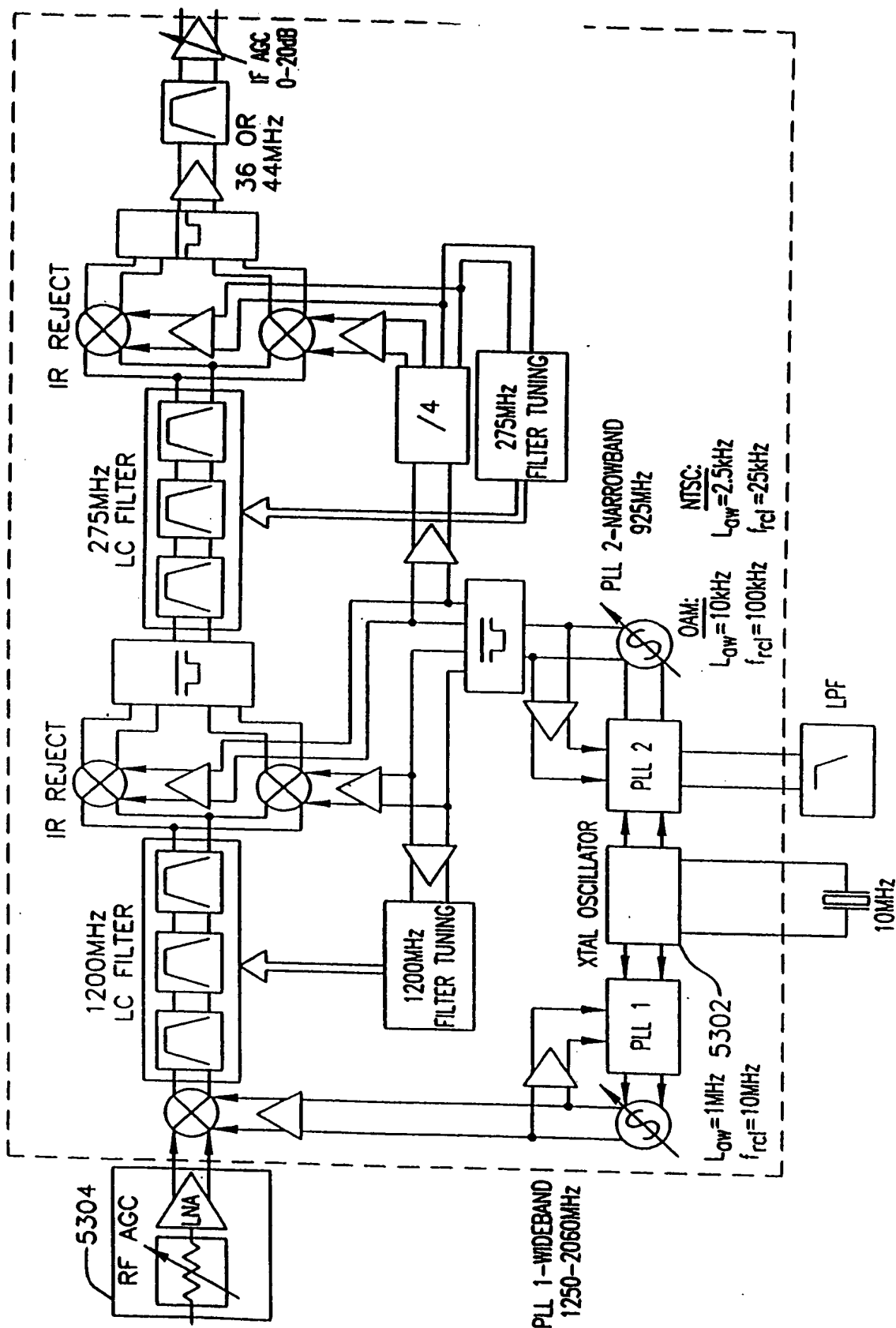


FIG. 54

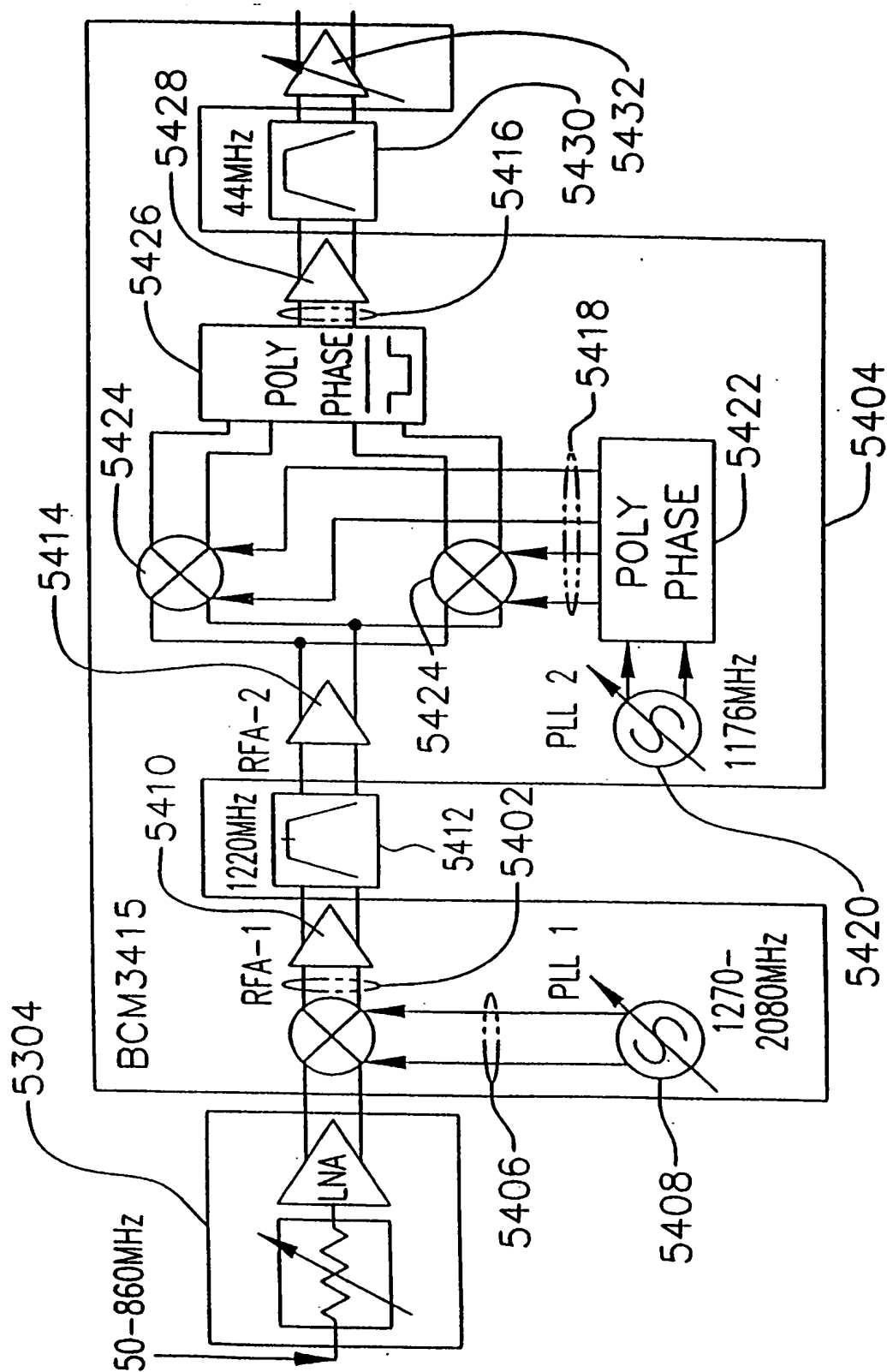
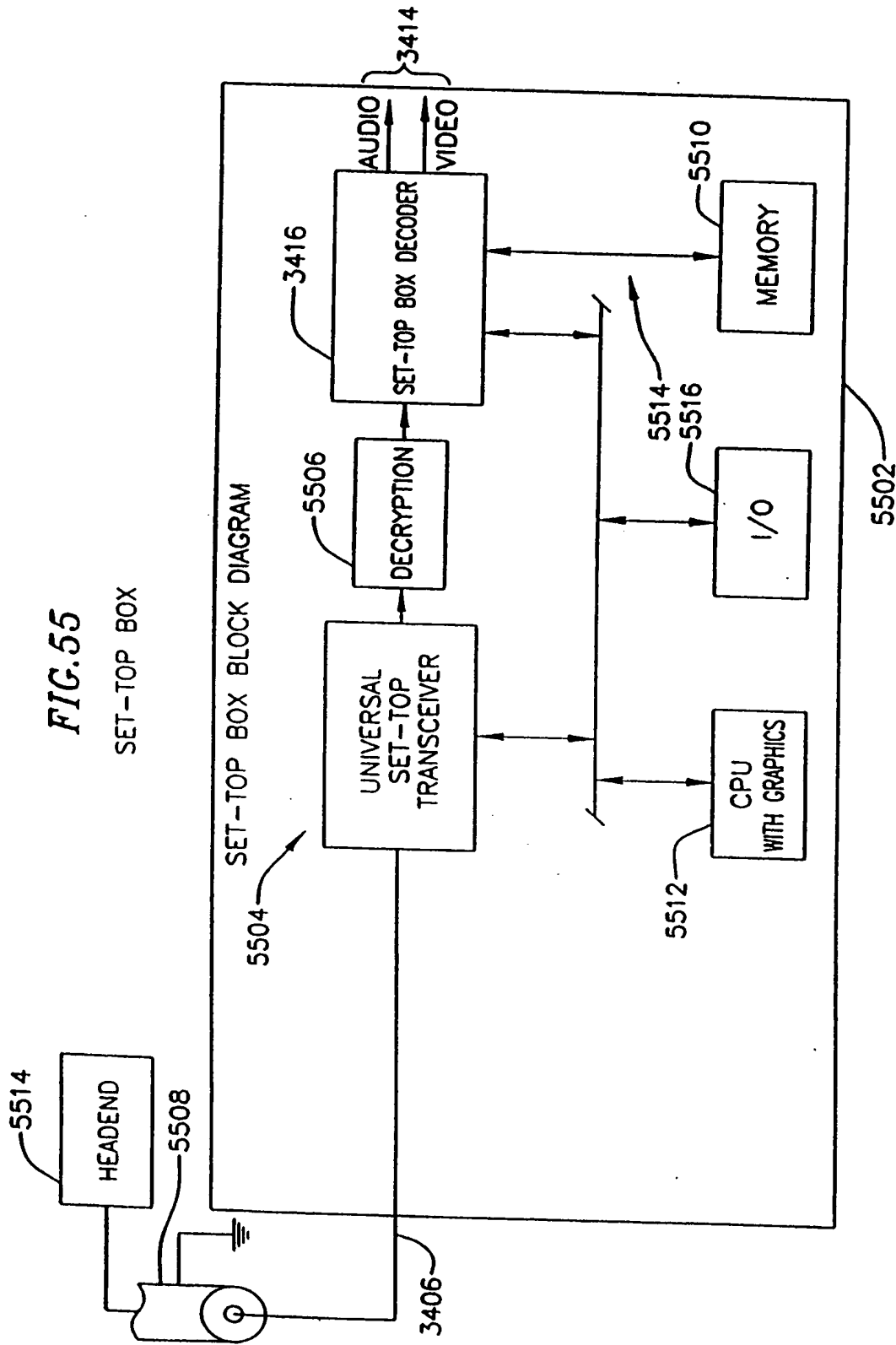


FIG. 55

SET-TOP BOX



**FIG. 56**  
 TELEVISION

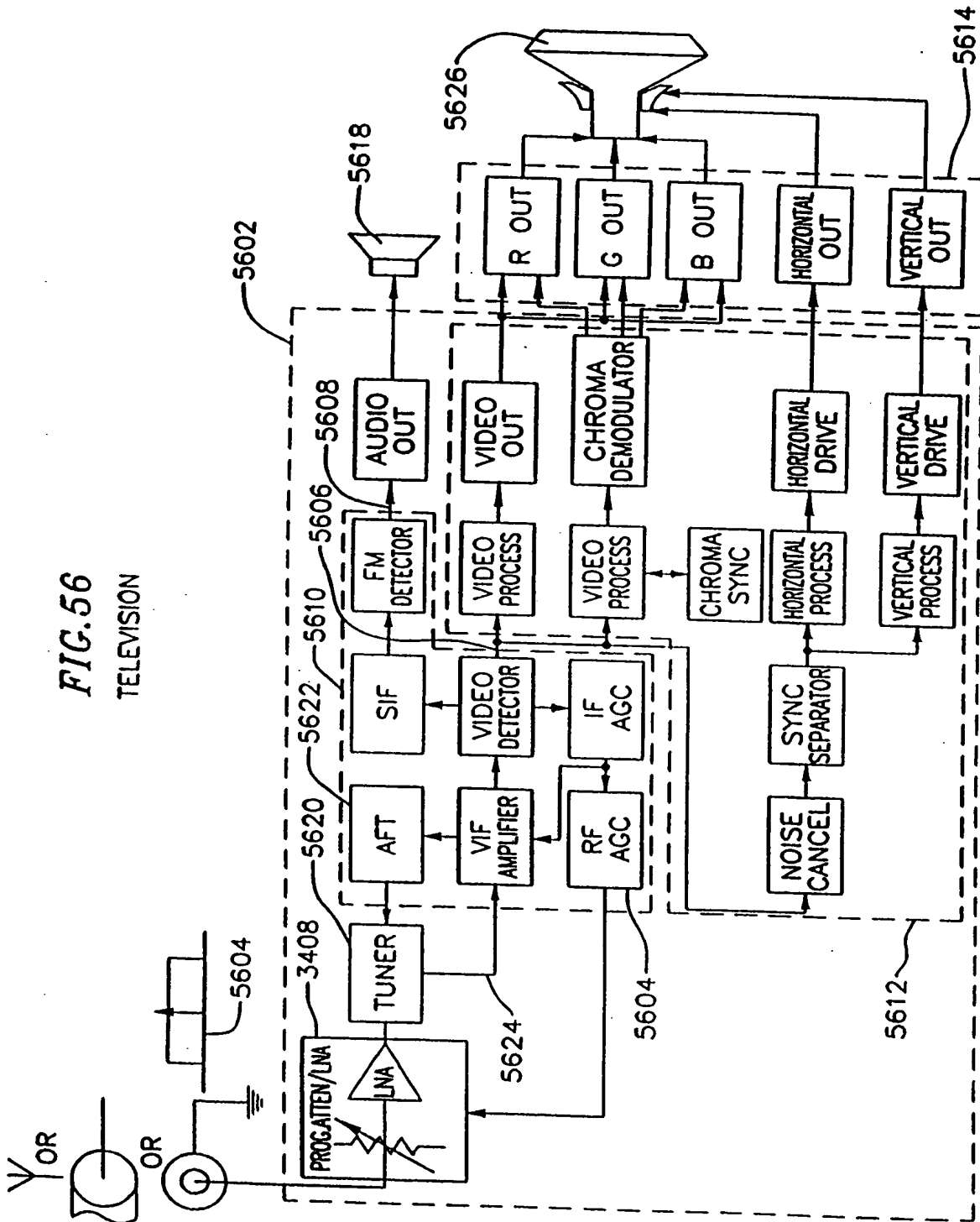


FIG. 57  
 VCR BLOCK DIAGRAM

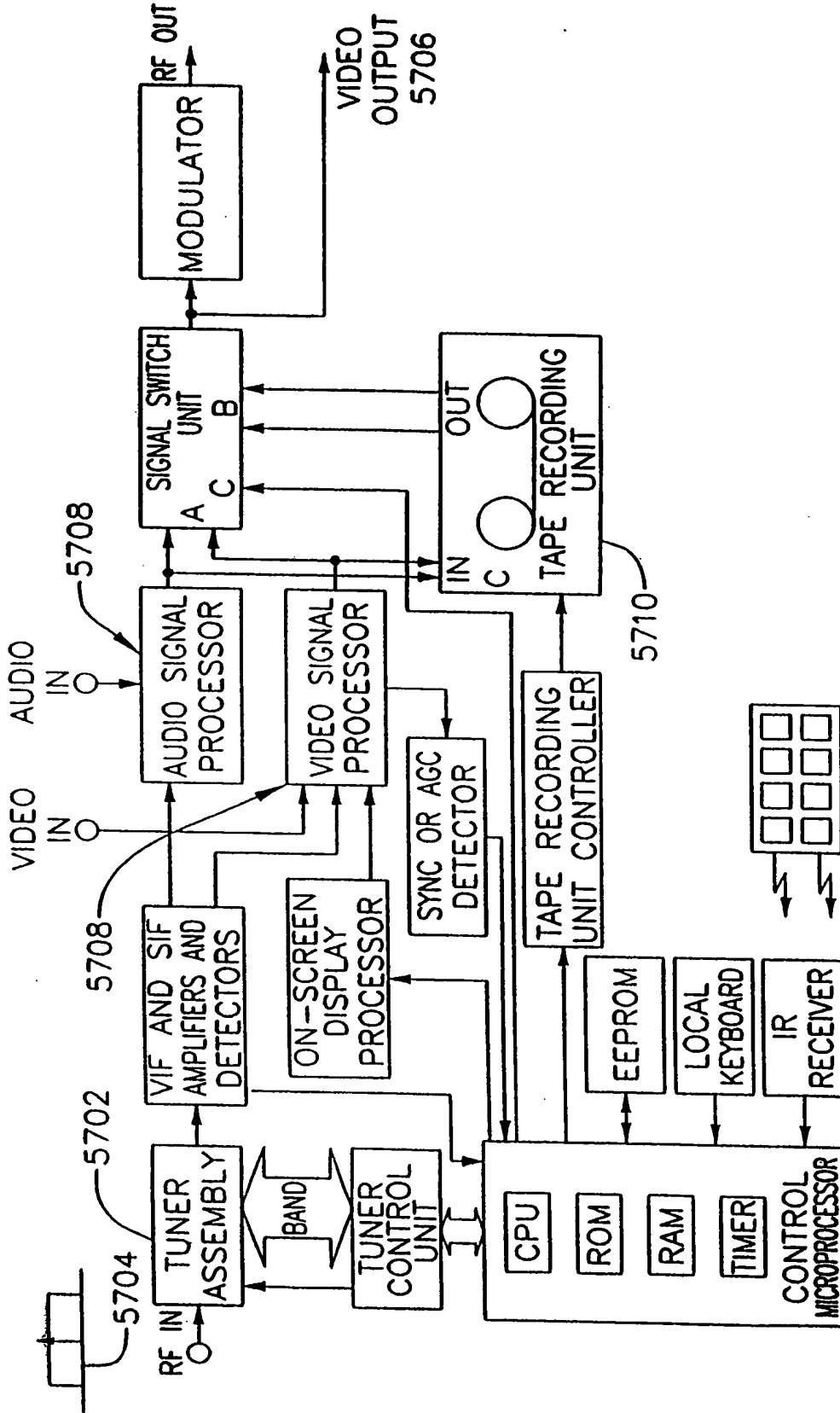
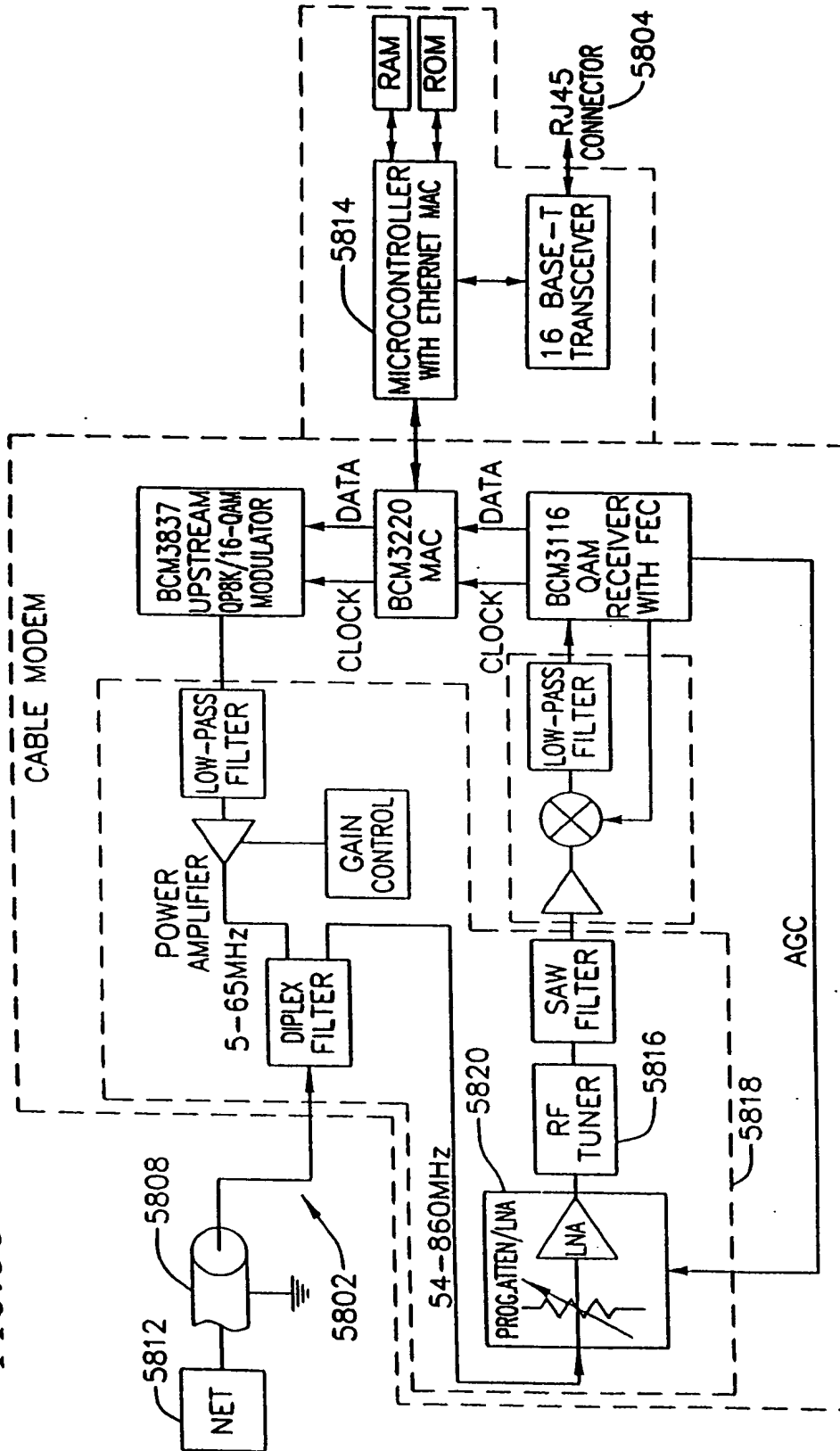
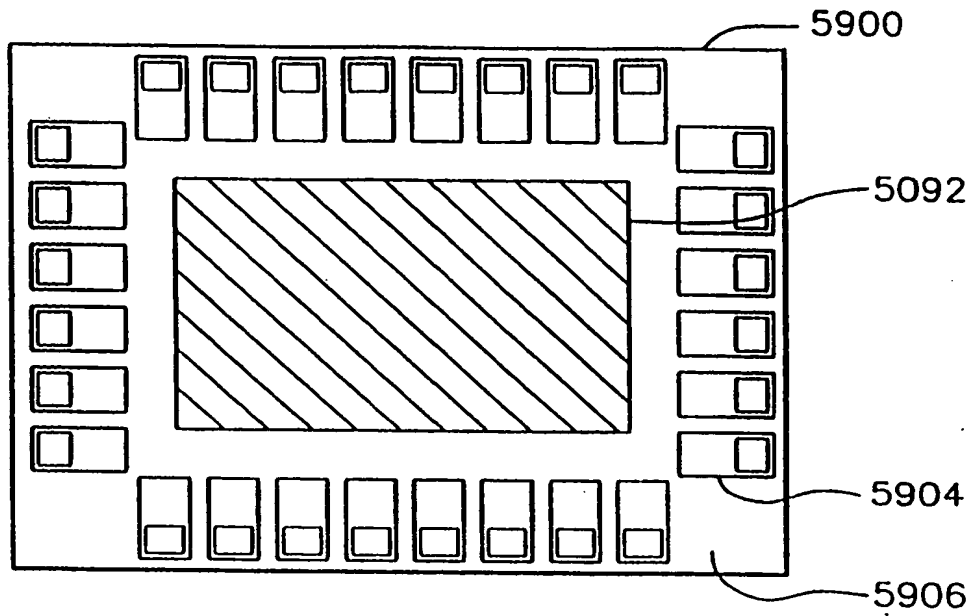




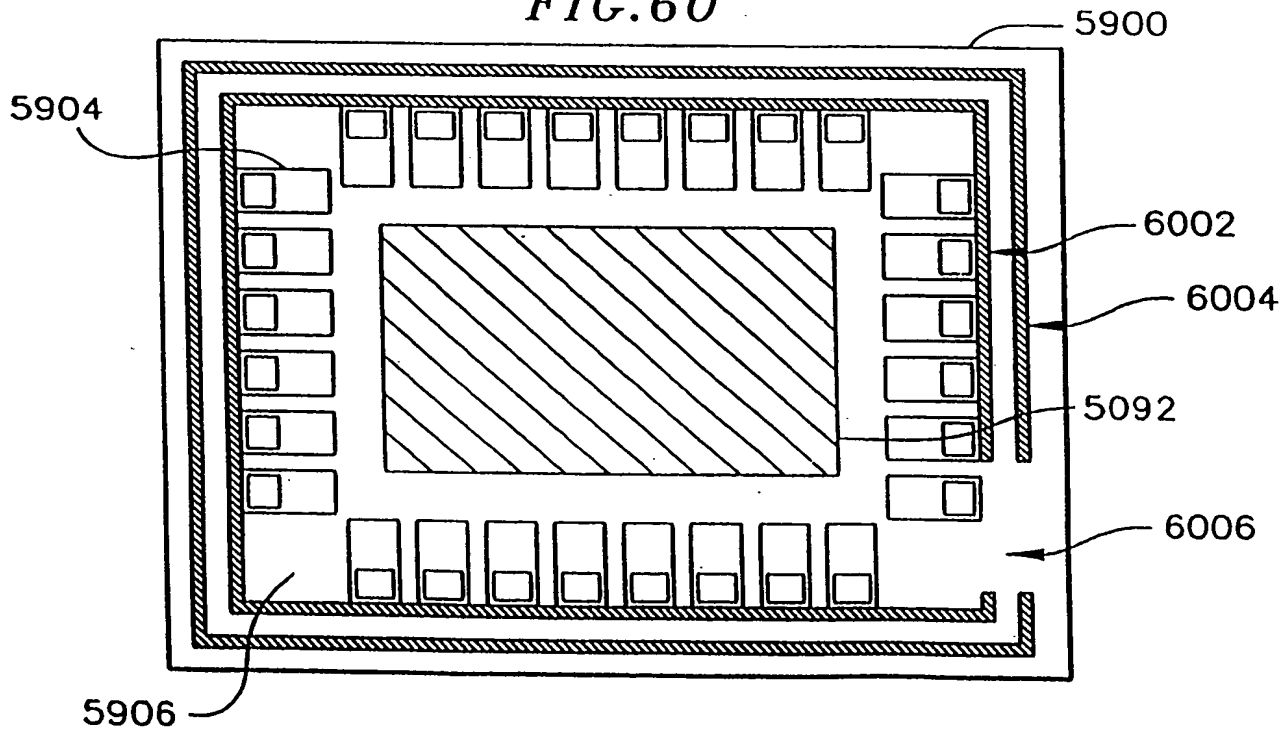
FIG. 58



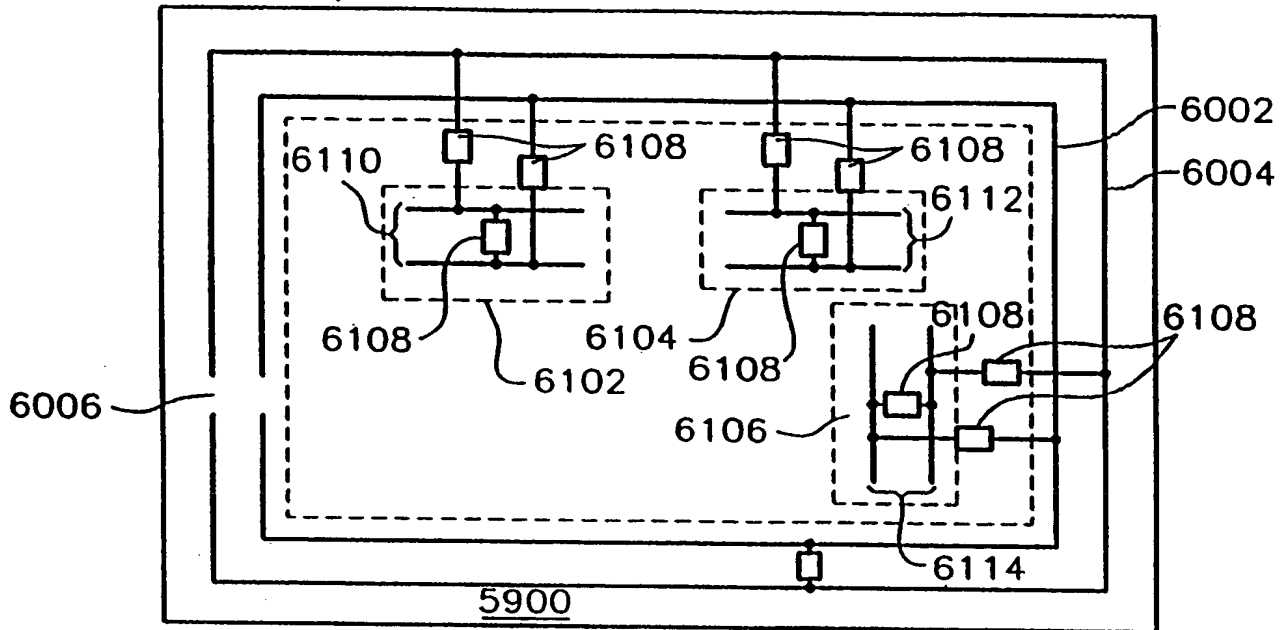
**FIG. 59**



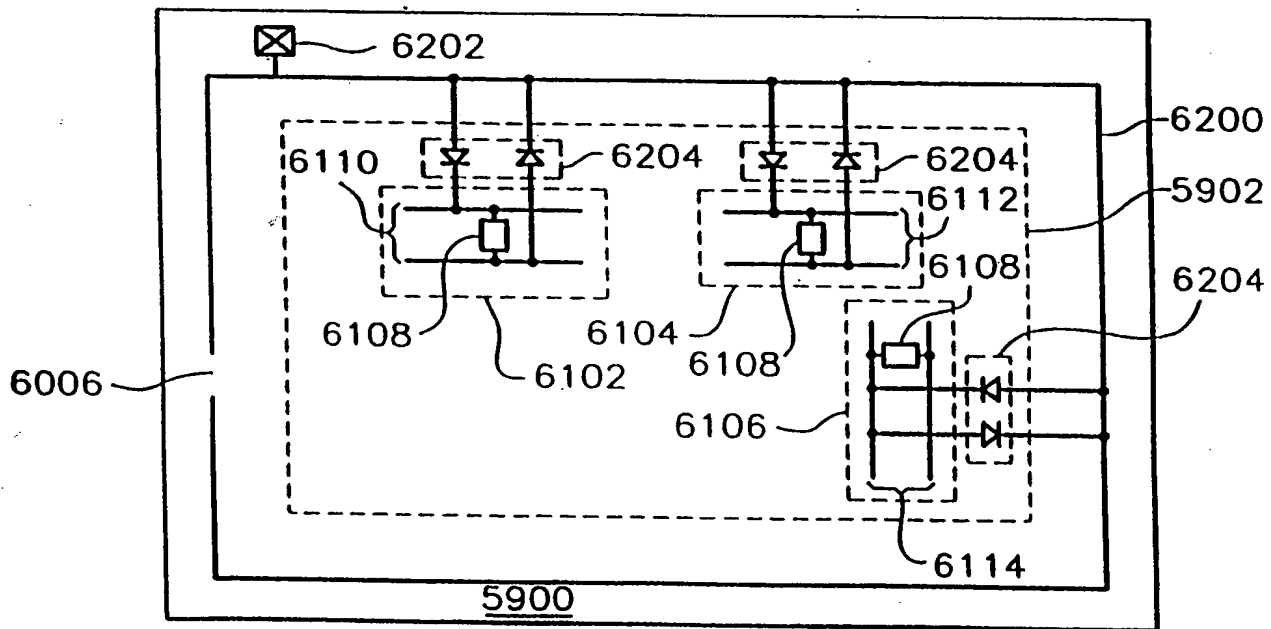
**FIG. 60**



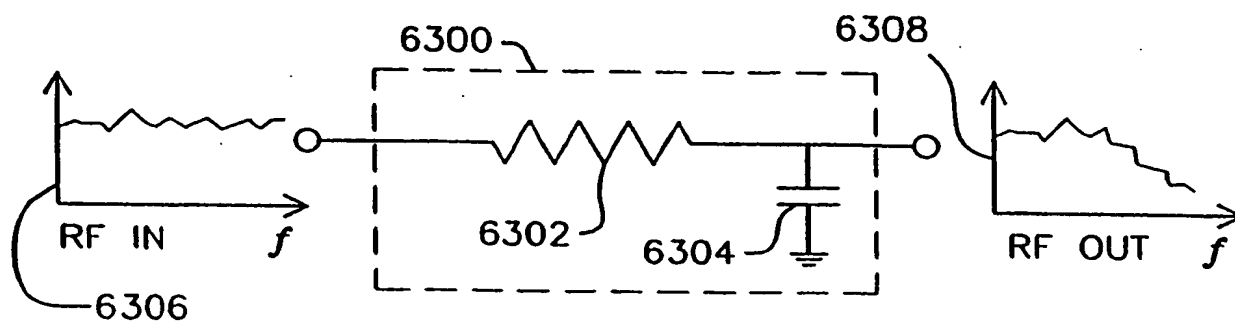
**FIG. 61**



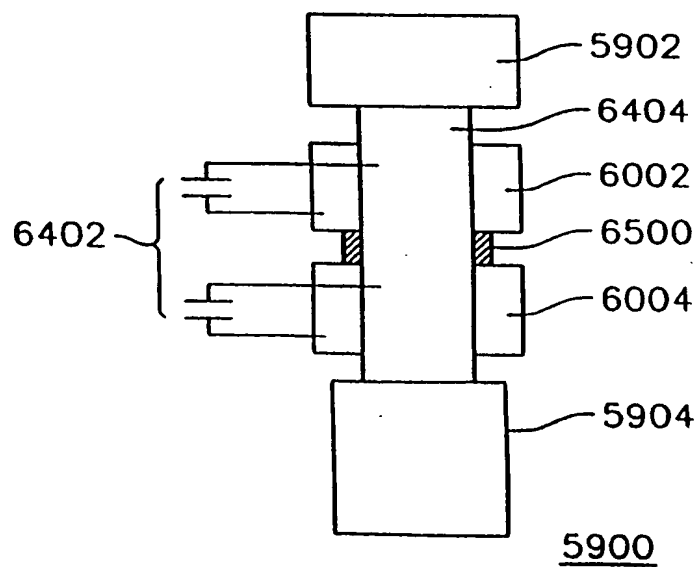
**FIG. 62**



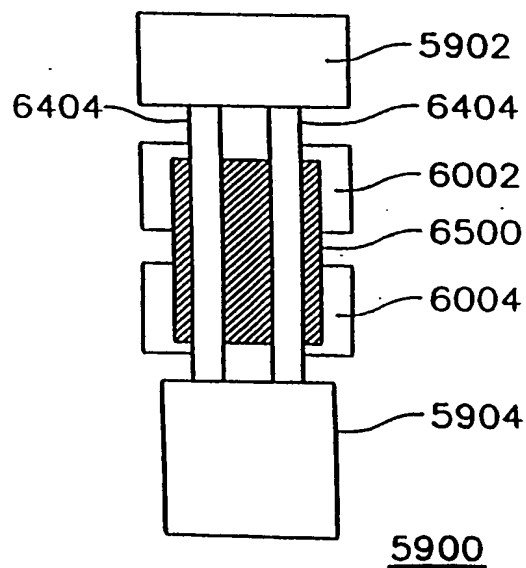
**FIG. 63**

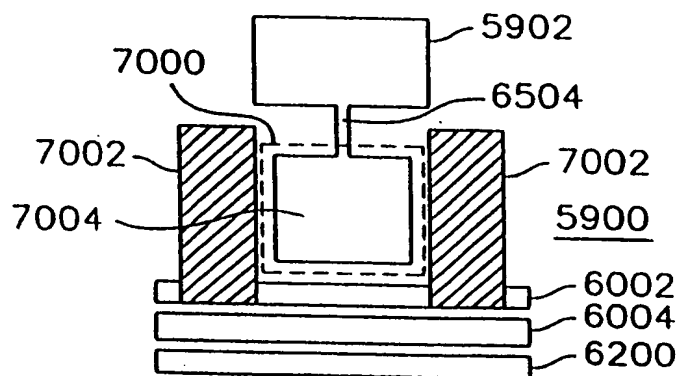


**FIG. 64**

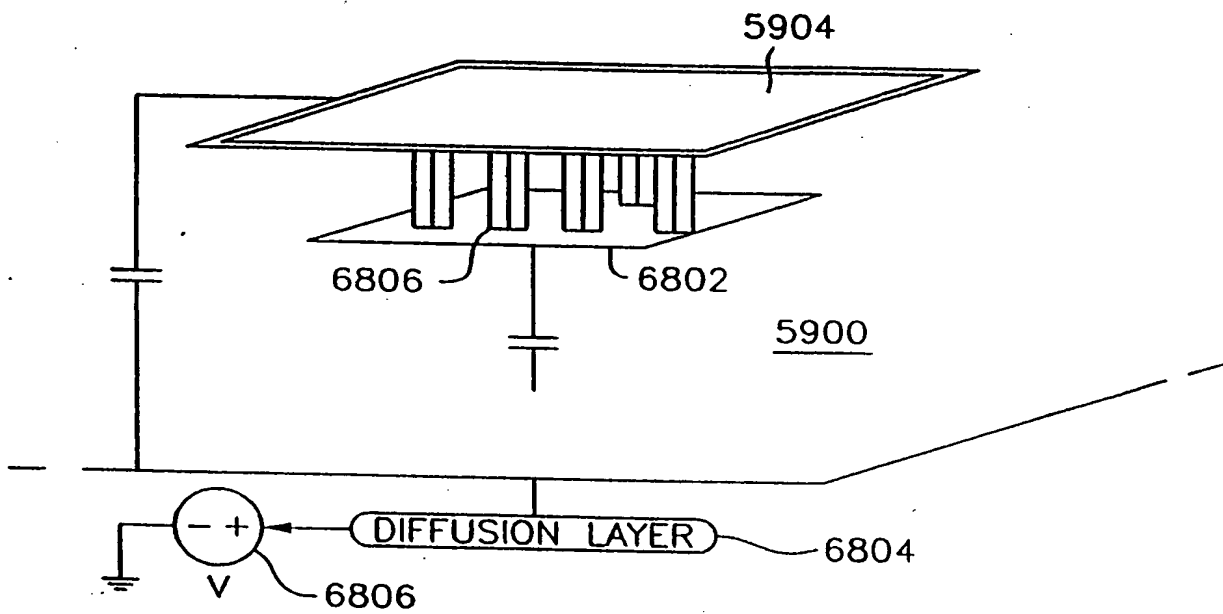


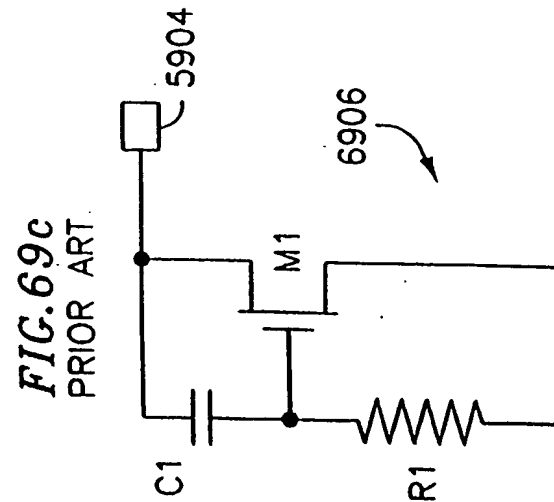
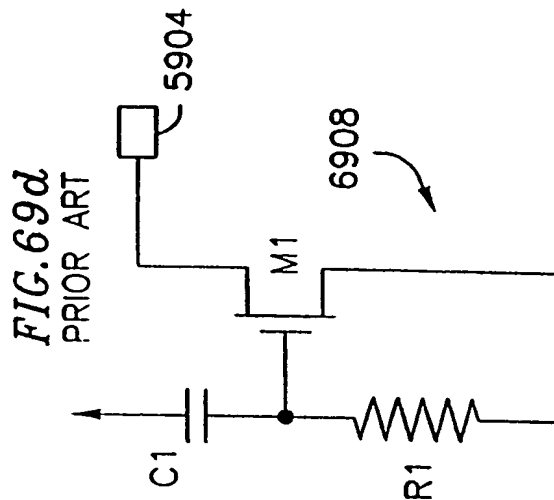
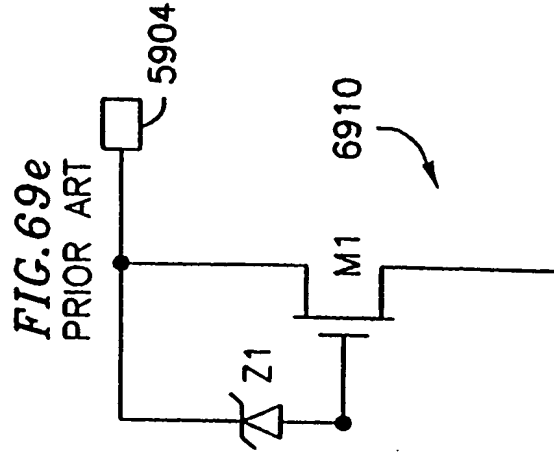
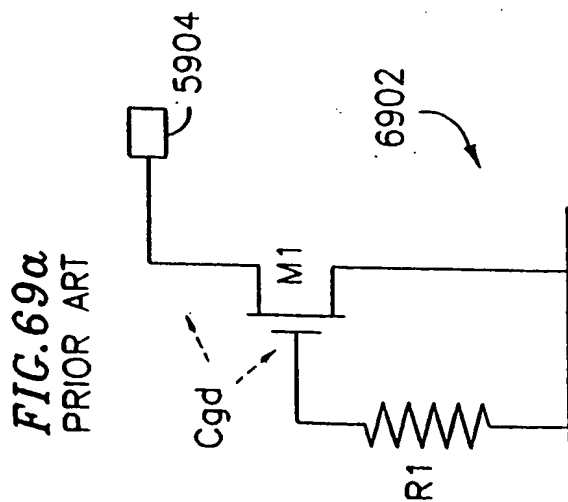
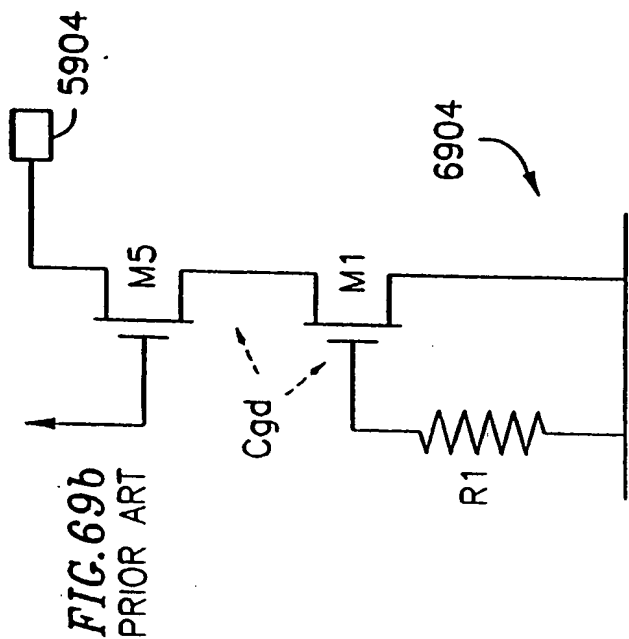
**FIG. 65**



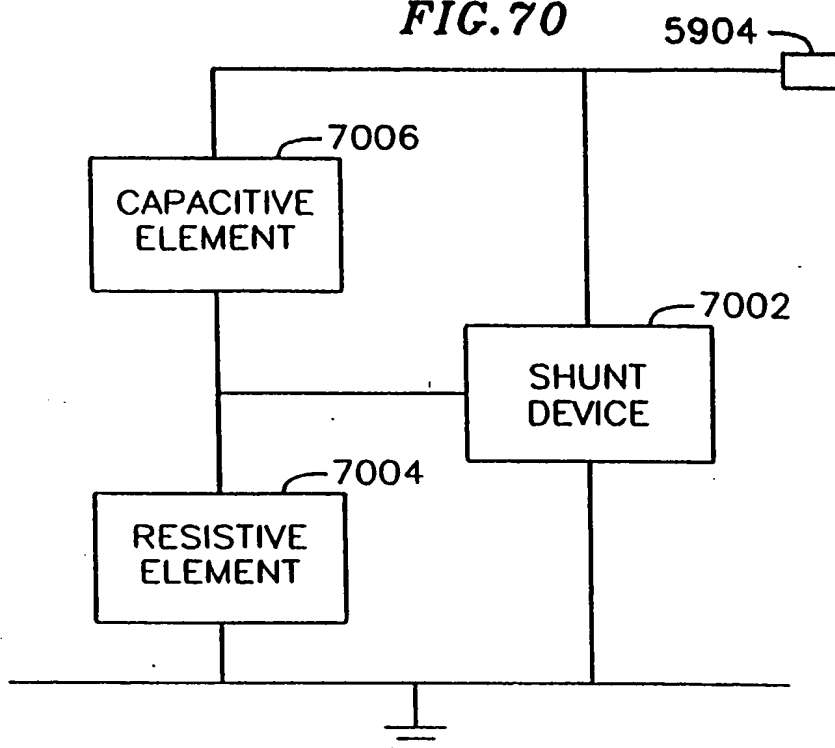


**FIG. 68**

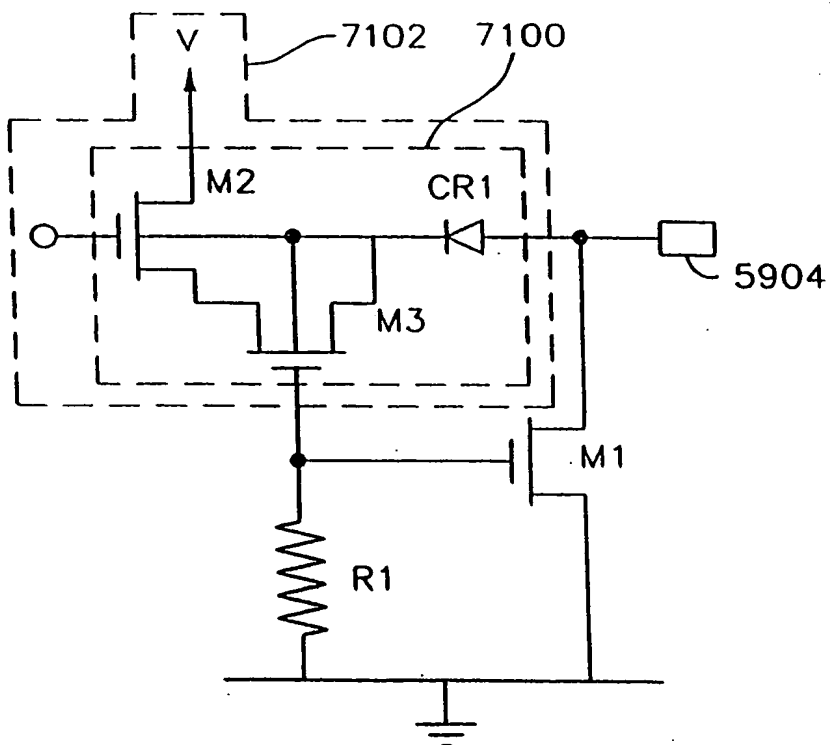




**FIG. 70**



**FIG. 71**





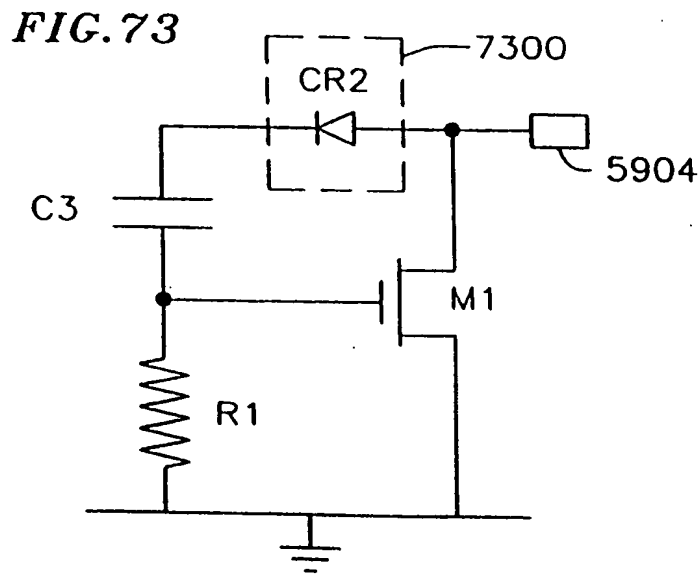
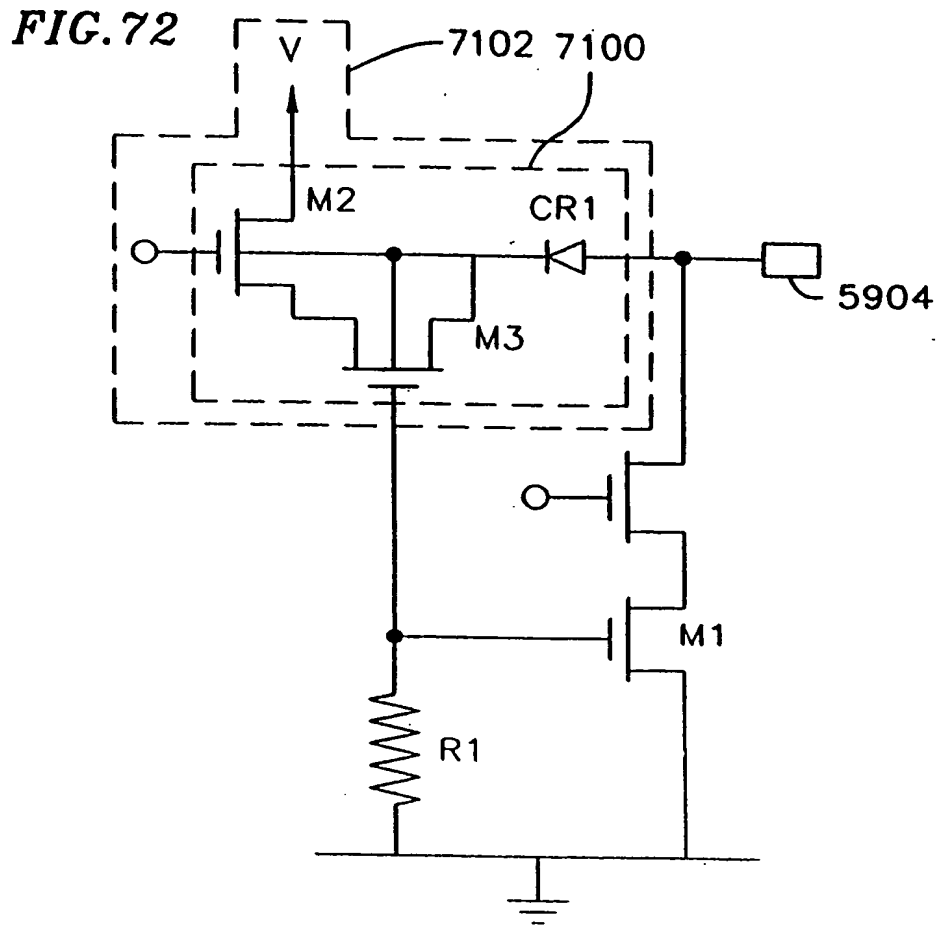


FIG. 74

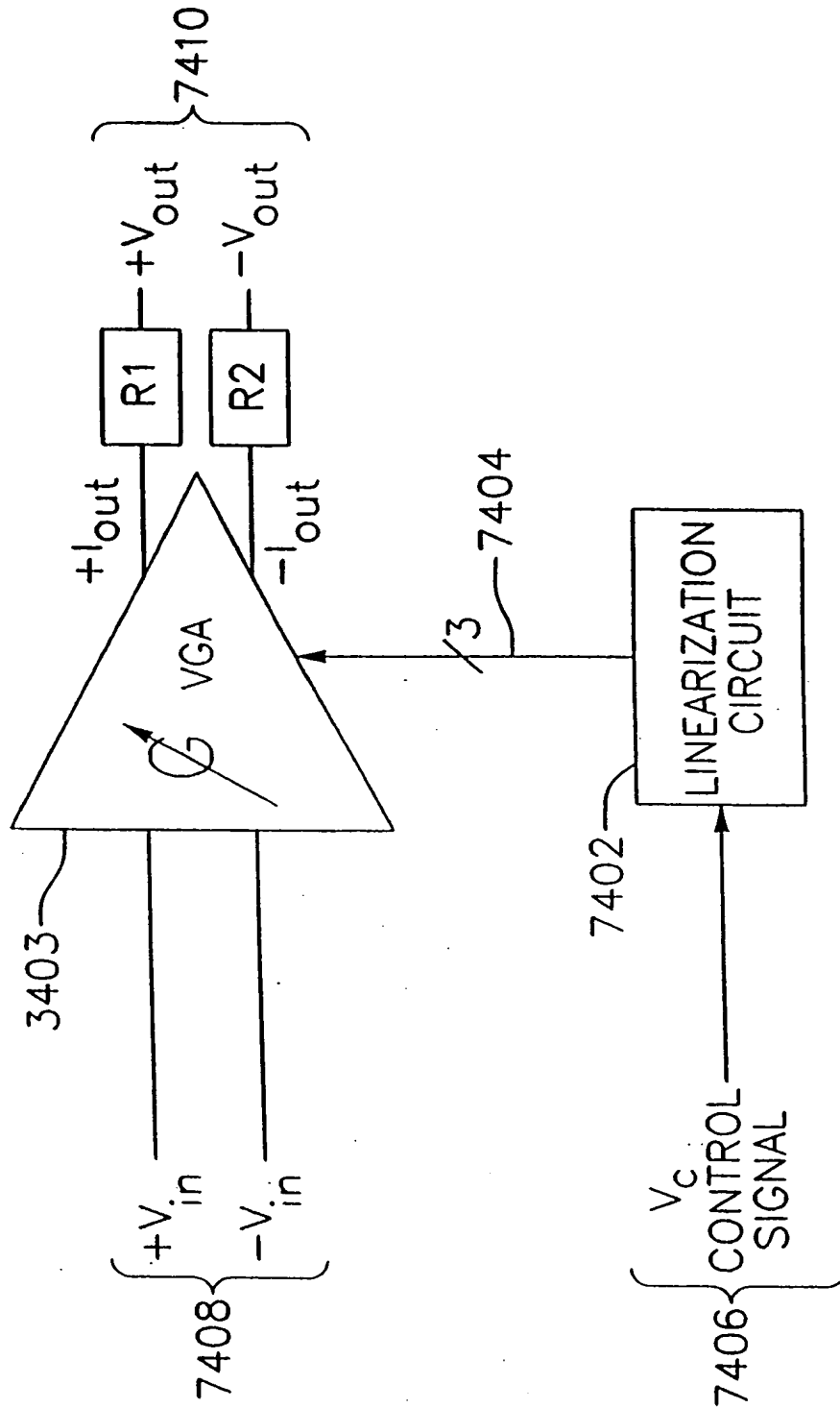
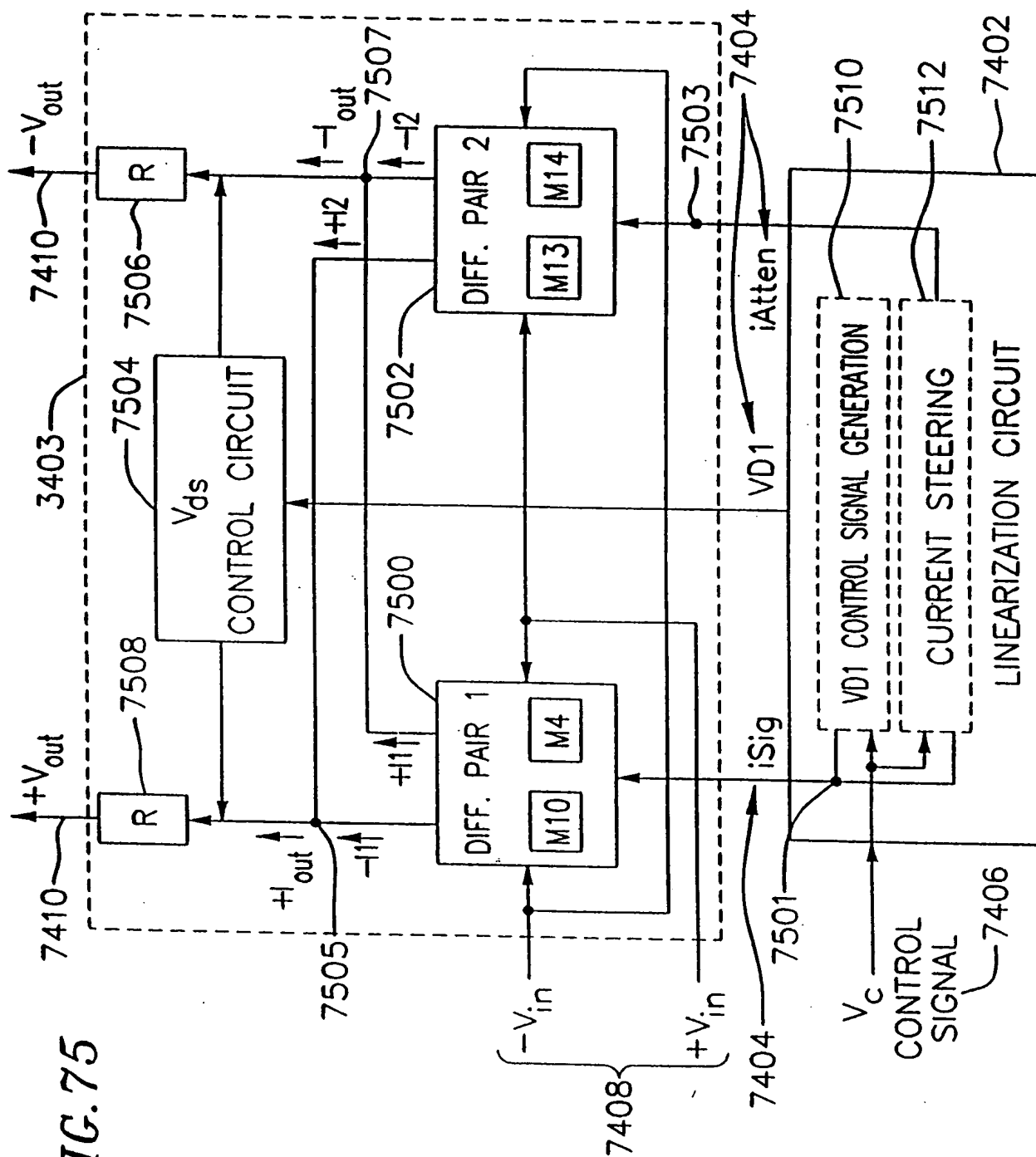


FIG. 75



*FIG. 76*

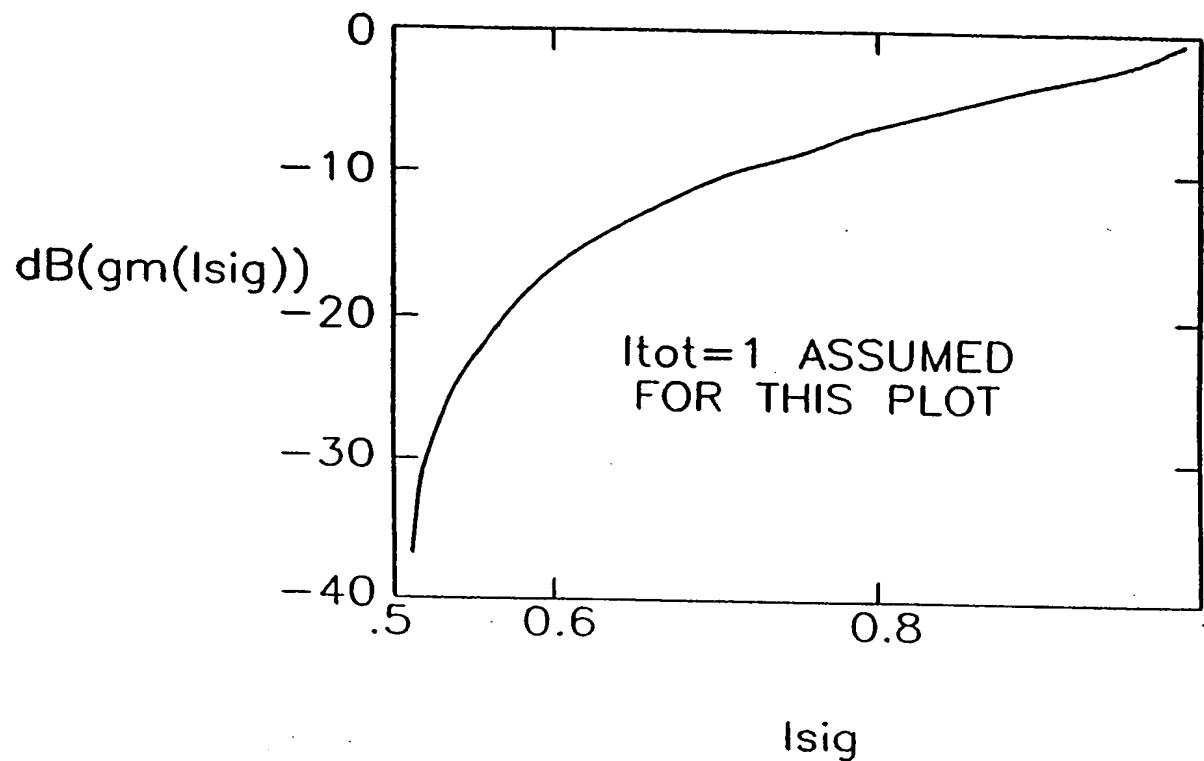


FIG. 77

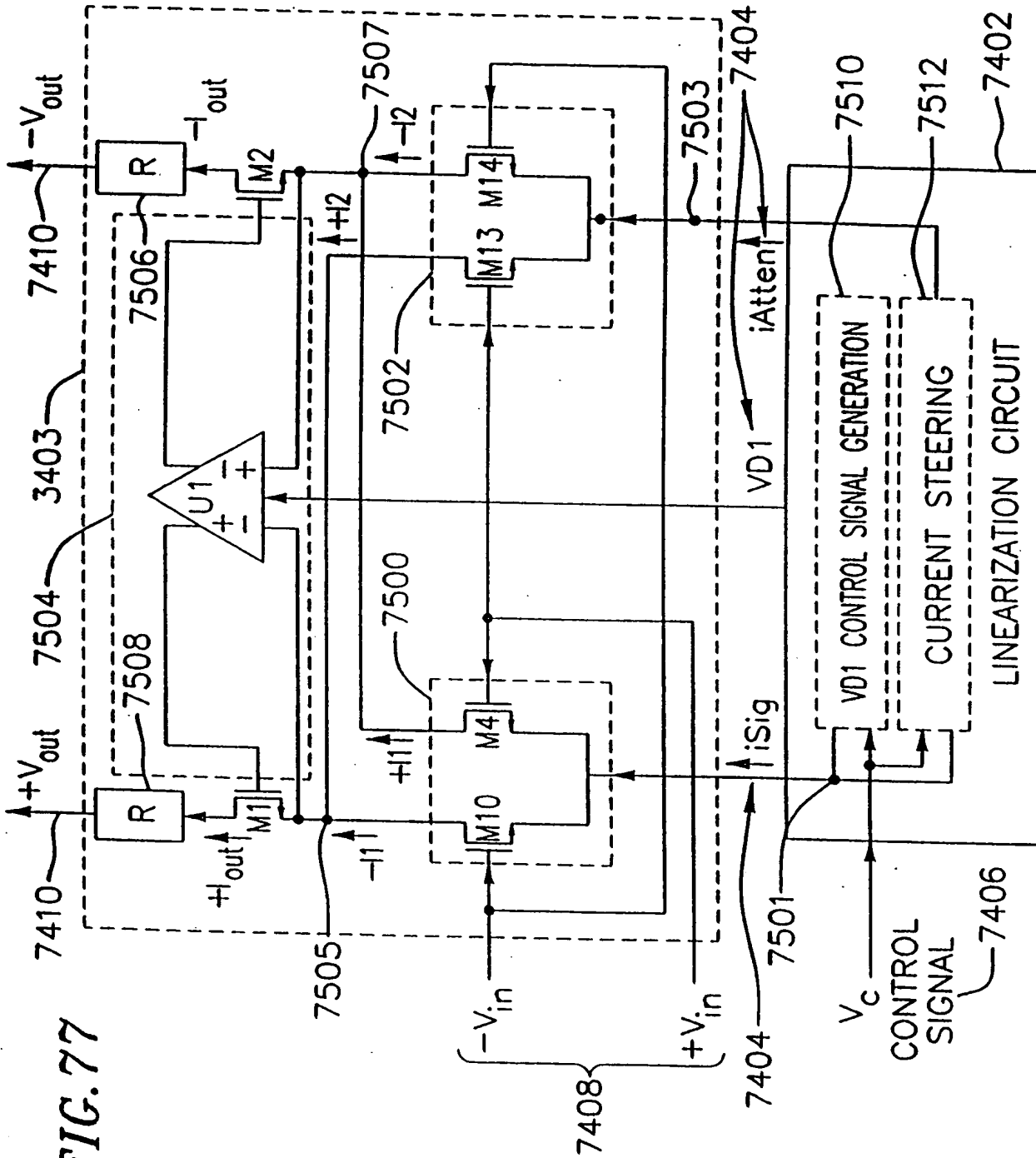


FIG. 78b

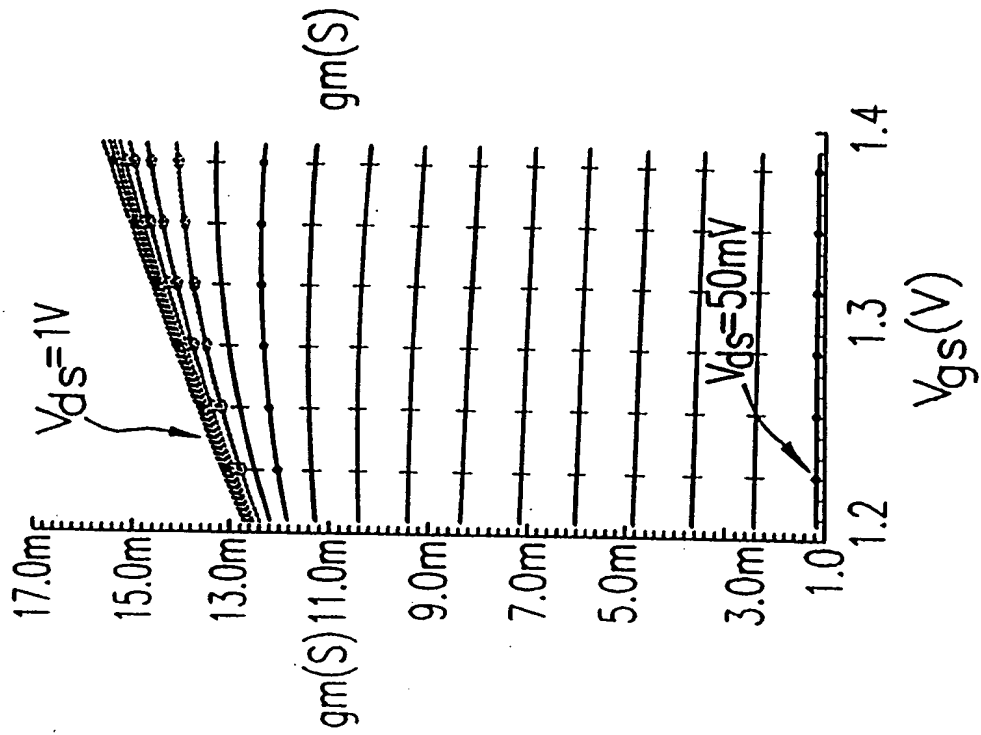
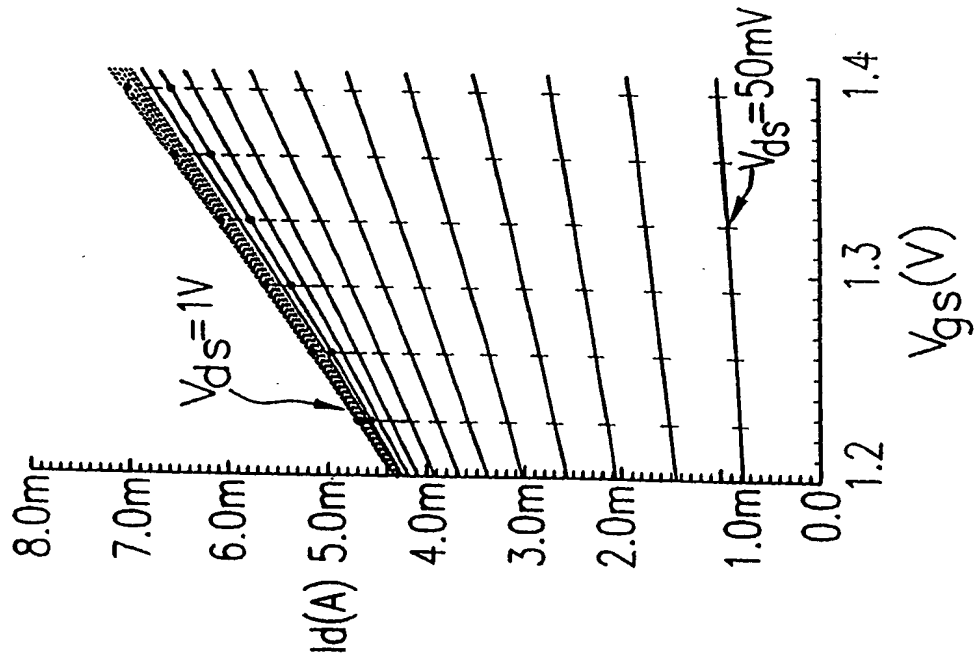
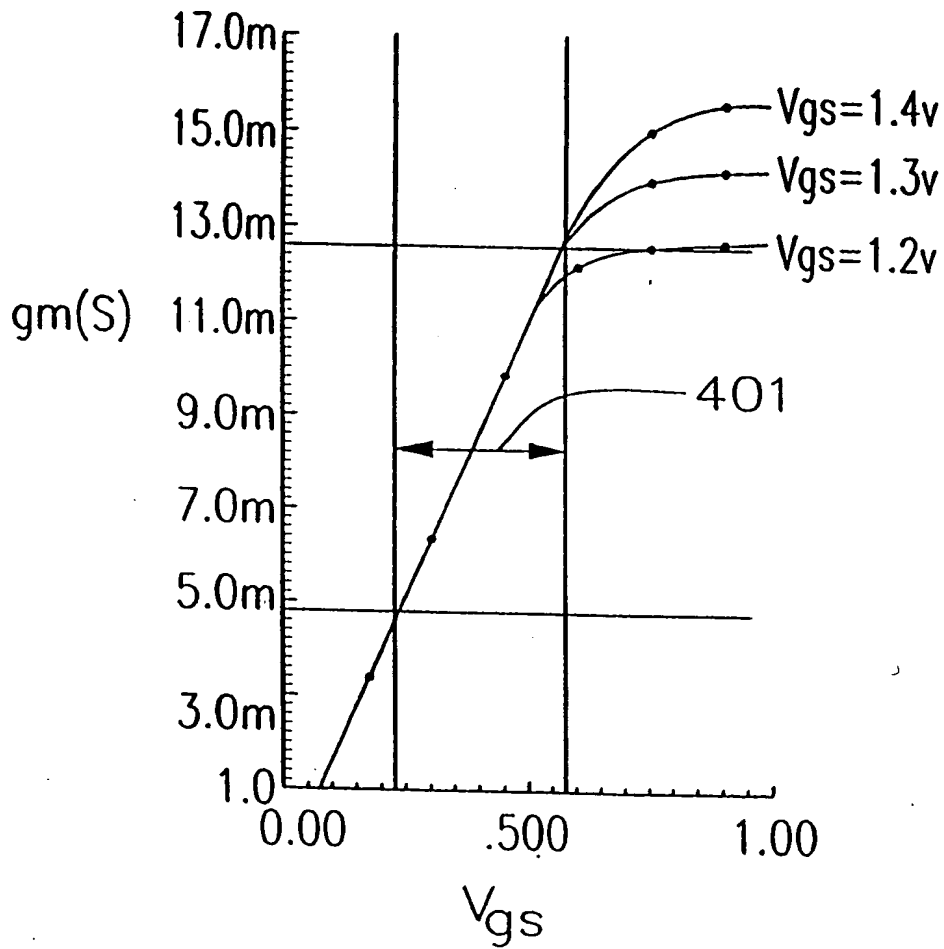


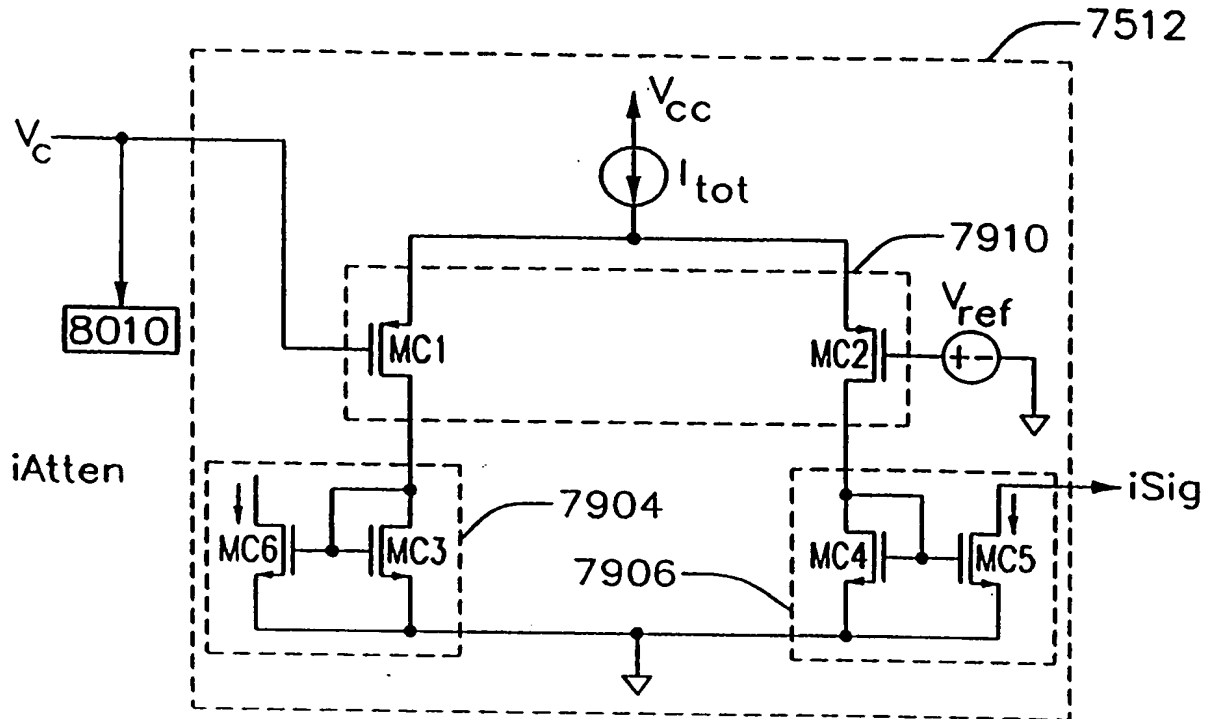
FIG. 78a



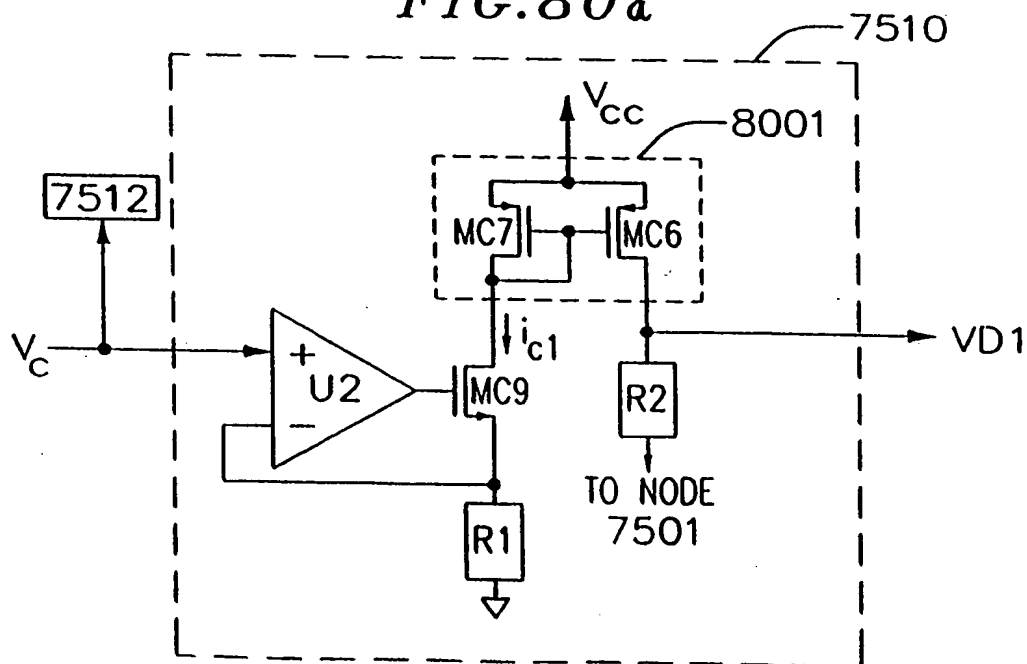
*FIG. 78c*



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**FIG. 80b**

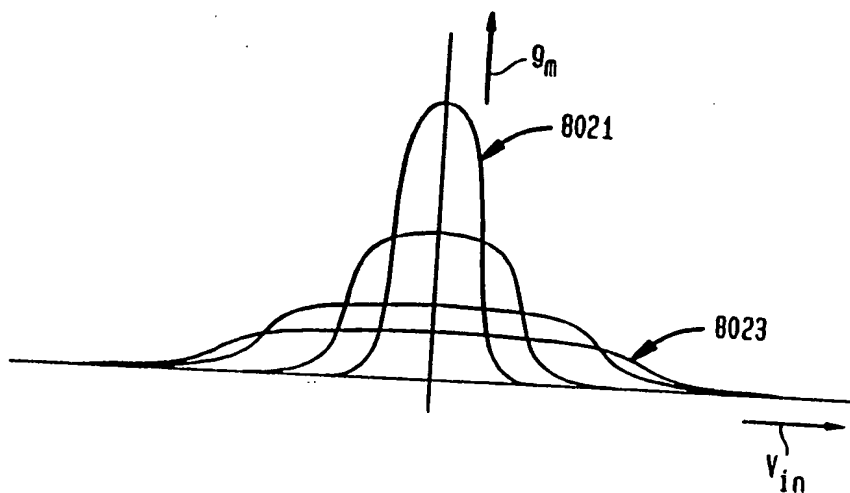


FIG. 80c

8079

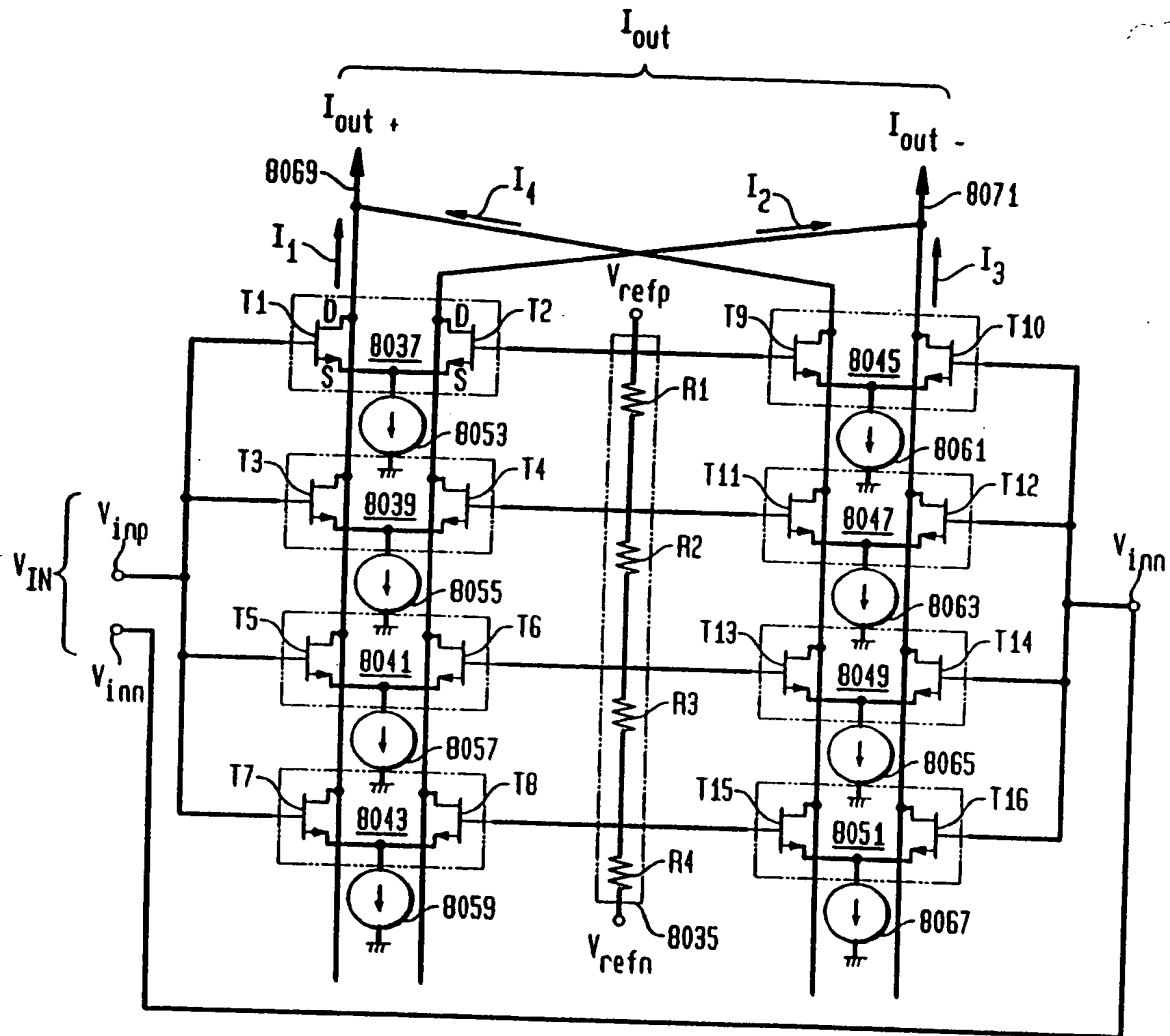
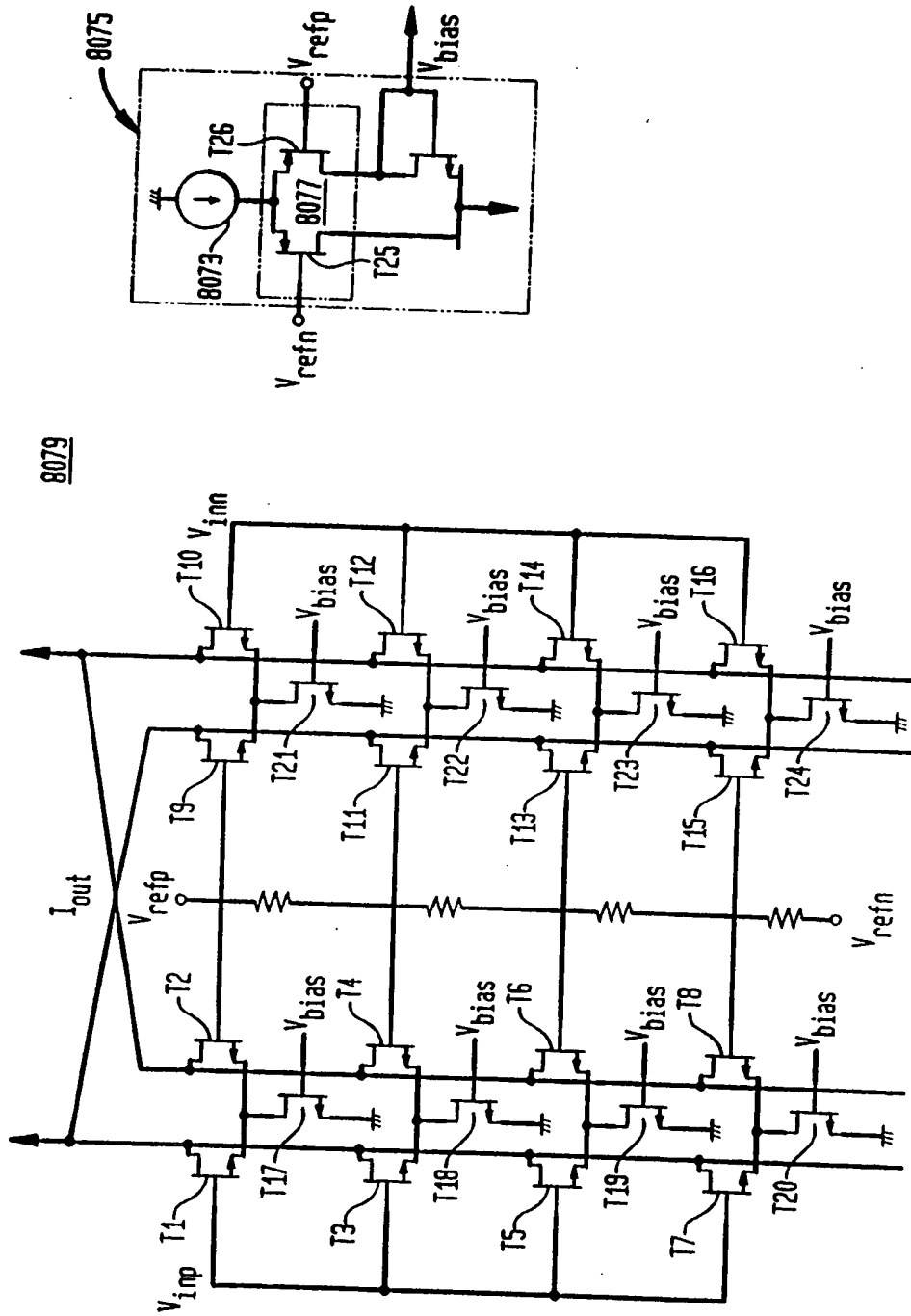


FIG. 80d



**FIG. 80e**

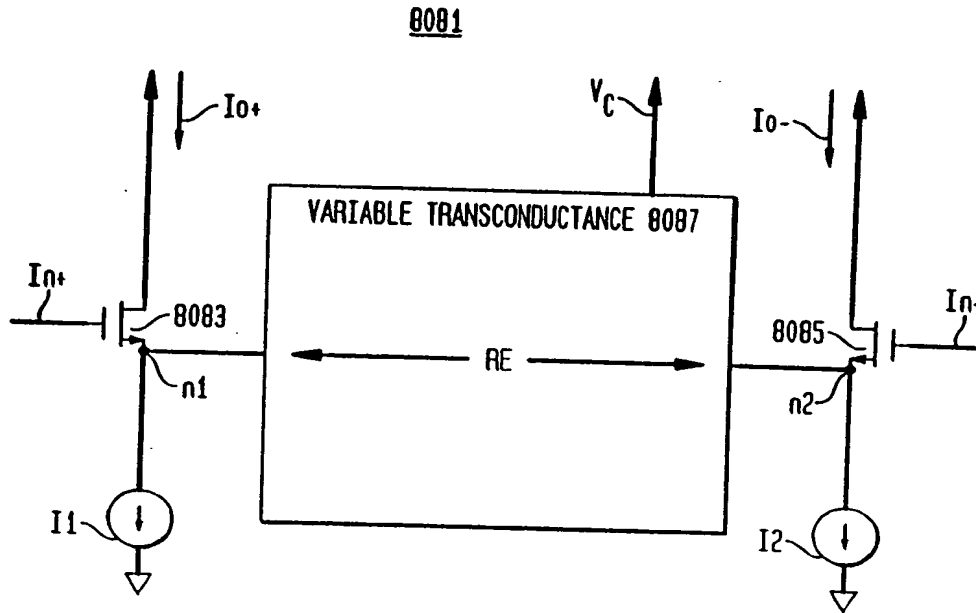
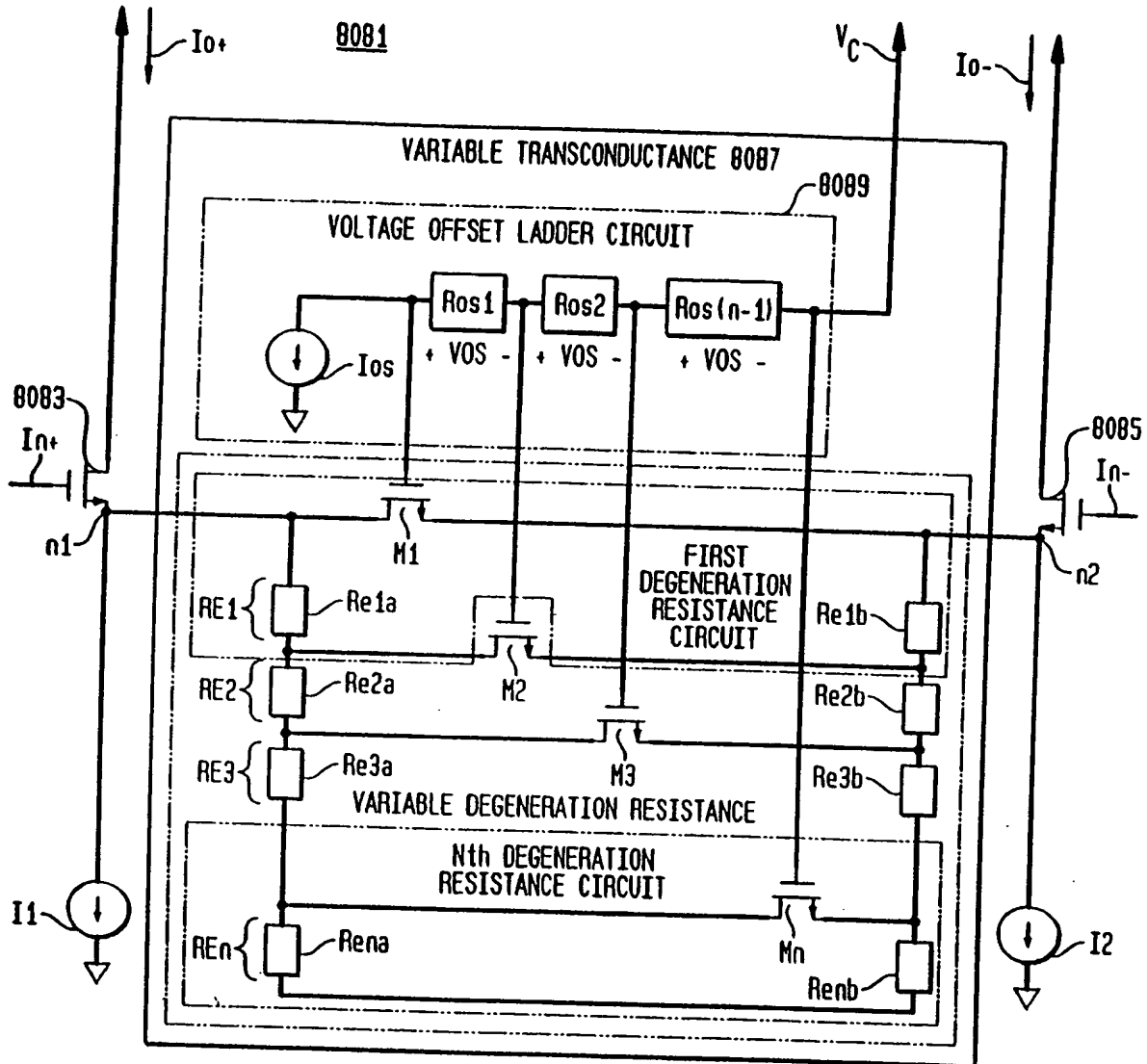
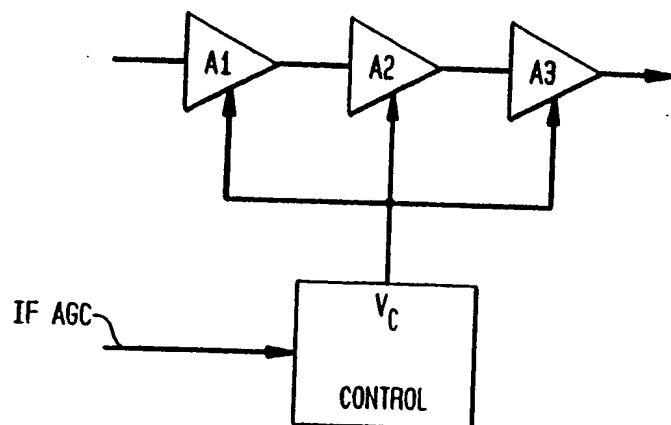


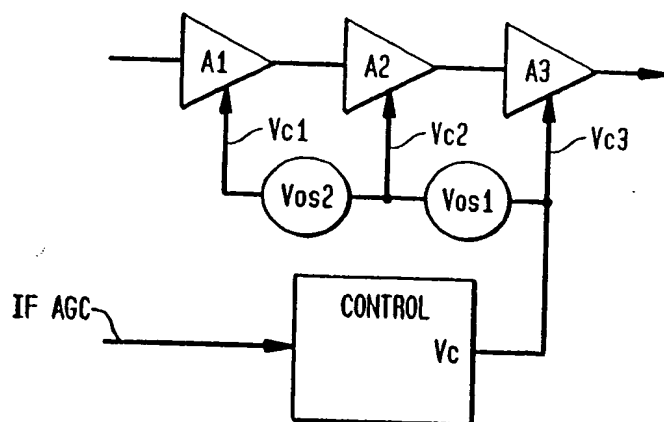
FIG. 80f



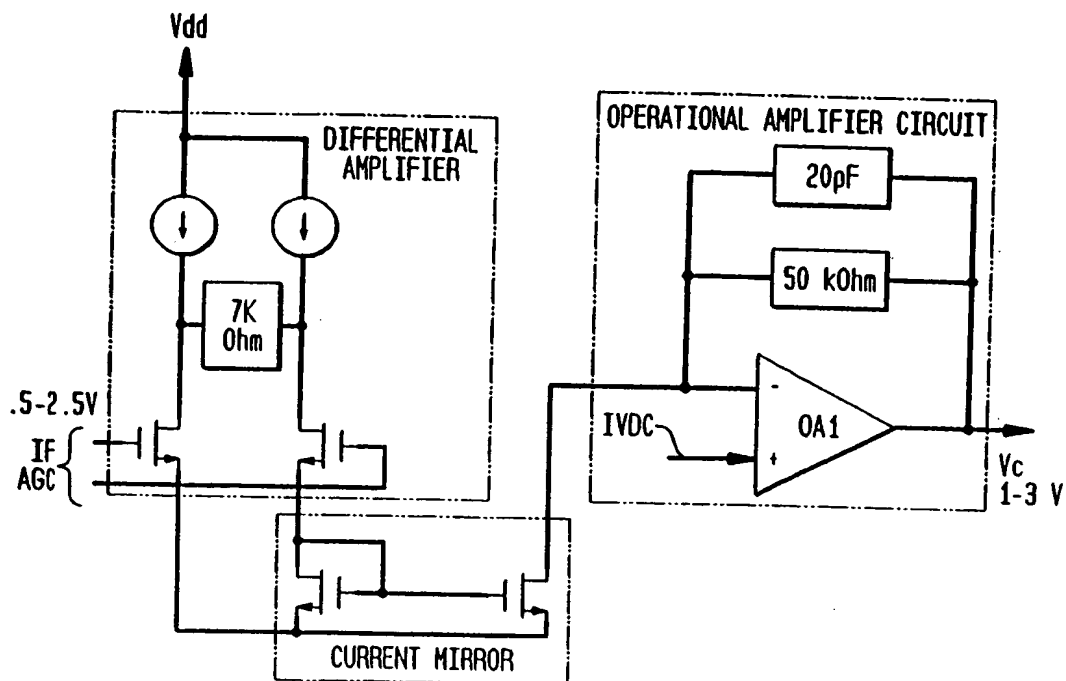
**FIG. 80g**



**FIG. 80h**



**FIG. 801**



8017



**FIG. 82**

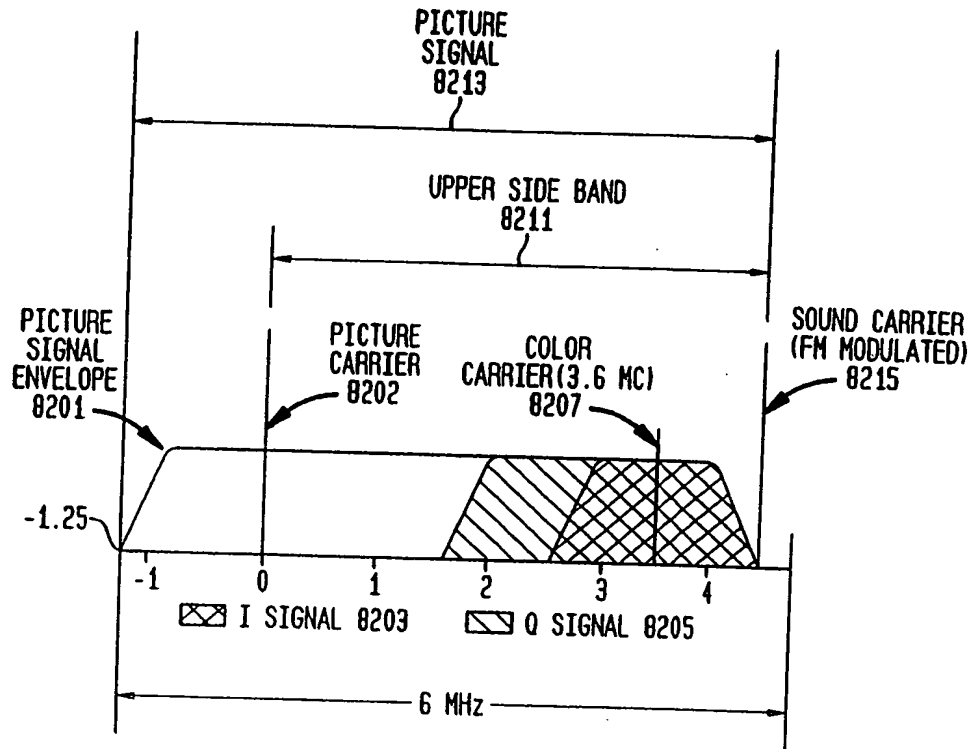
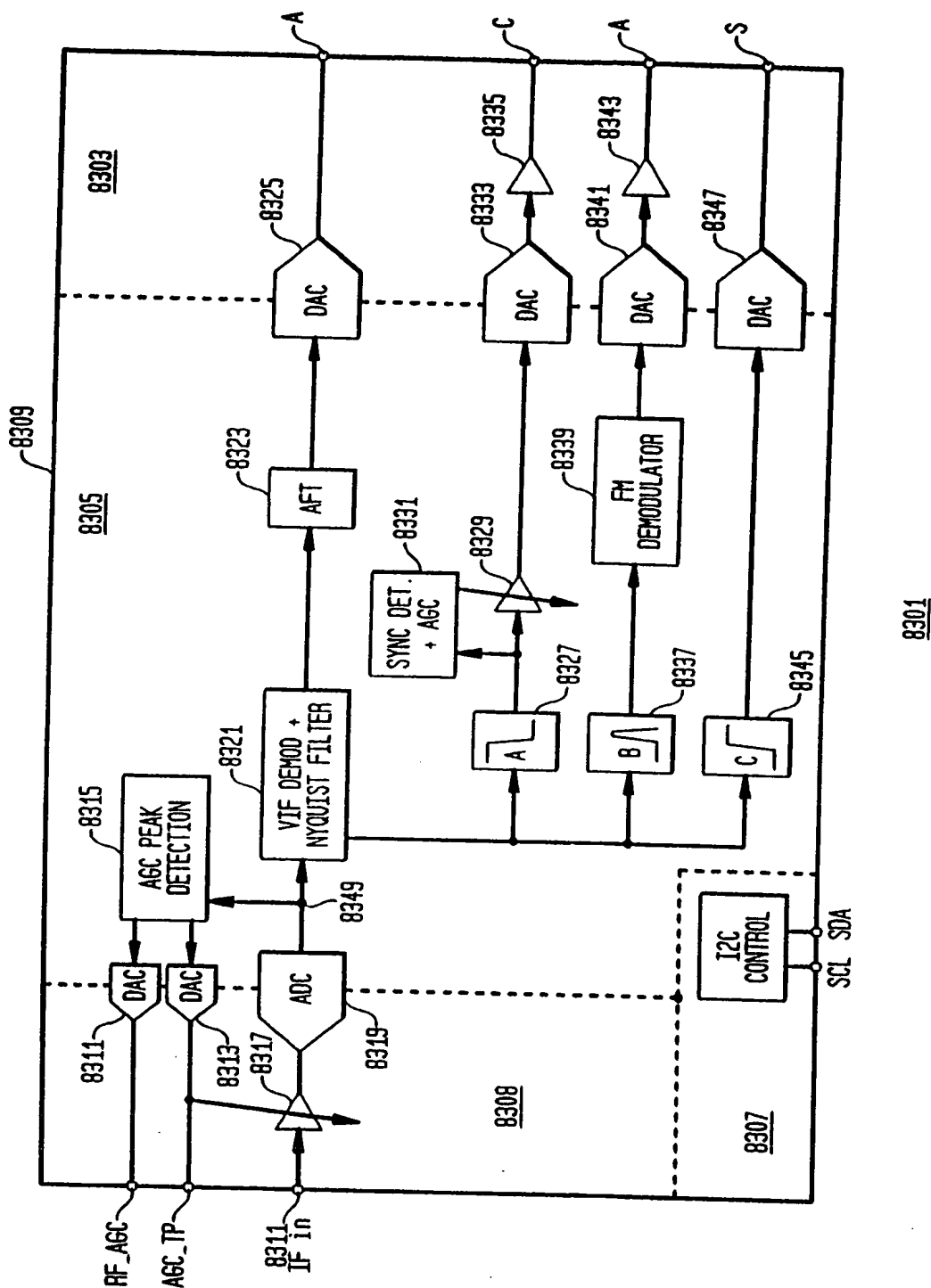
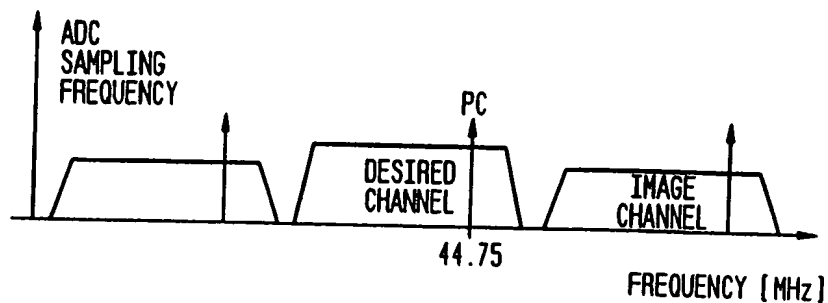


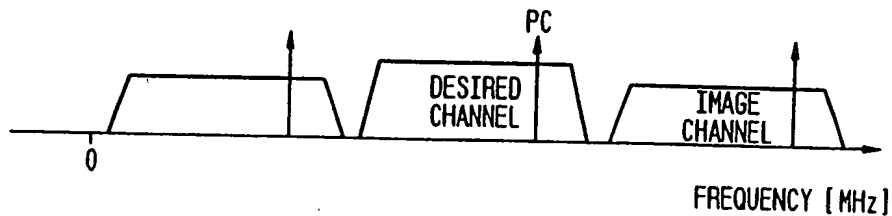
FIG. 83



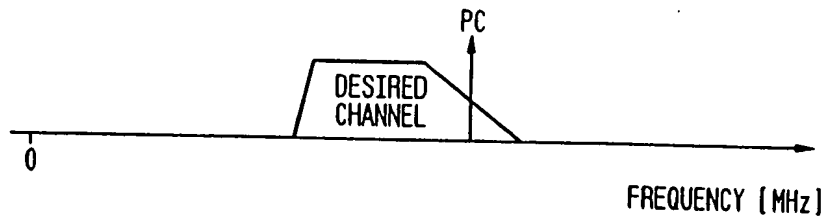
**FIG. 84a**



**FIG. 84b**



**FIG. 84c**



**FIG. 84d**



FIG. 85

